```
   1 TGCAGTTTAA GTGTTCGGAT TCCAAGGGAA ACAGACAAAC CTCACGAAAG
  51 GAAGGAAGCA AGCAAGCAAG GAAGGAACTG CAGGAGGAAA AGAACAGGCA
 101 GAACAGCGAG AAGAATAAAG GGAAAGGGGG GGAAACACCA AATCTATGAT
 151 TGGACCTGGG CTTCTTTTTC GCCAATGCAA AAAGGAATAT GCAGCACATT
 201 TTTGCCTTCT TCTGCACCGG TTTCCTAGGC GCGGTAGTAG GTGCCAATTT
 251 CCCCAACAAT ATCCAGATCG GGGGATTATT TCCAAACCAG CAGTCACAGG
 301 AACATGCTGC TTTTAGATTT GCTTTGTCGC AACTCACAGA GCCCCCGAAG
 351 CTGCTCCCCC AGATTGATAT TGTGAACATC AGCGACAGCT TTGAGATGAC
 401 CTATAGATTC TGTTCCCAGT TCTCCAAAGG AGTCTATGCC ATCTTTGGGT
 451 TTTATGAACG TAGGACTGTC AACATGCTGA CCTCCTTTTG TGGGGCCCTC
 501 CACGTCTGCT TCATTACGCC GAGCTTTCCC GTTGATACAT CCAATCAGTT
 551 TGTCCTTCAG CTGCGCCCTG AACTGCAGGA TGCCCTCATC AGCATCATTG
 601 ACCATTACAA GTGGCAGAAA TTTGTCTACA TTTATGATGC CGACCGGGGC
 651 TTATCCGTCC TGCAGAAAGT CCTGGATACA GCTGCTGAGA AGAACTGGCA
 701 GGTGACAGCA GTCAACATTT TGACAACCAC AGAGGAGGGA TACCGGATGC
 751 TCTTTCAGGA CCTGGAGAAG AAAAAGGAGC GGCTGGTGGT GGTGGACTGT
 801 GAATCAGAAC GCCTCAATGC TATCTTGGGC CAGATTATAA AGCTAGAGAA
 851 GAATGGCATC GGCTACCACT ACATTCTTGC AAATCTGGGC TTCATGGACA
 901 TTGACTTAAA CAAATTCAAG GAGAGTGGCG CCAATGTGAC AGGTTTCCAG
 951 CTGGTGAACT ACACAGACAC TATTCCGGCC AAGATCATGC AGCAGTGGAA
1001 GAATAGTGAT GCTCGAGACC ACACACGGGT GGACTGGAAG AGACCCAAGT
1051 ACACCTCTGC GCTCACCTAC GATGGGGTGA AGGTGATGGC TGAGGCTTTC
1101 CAGAGCCTGC GGAGGCAGAG AATTGATATA TCTCGCCGGG GGAATGCTGG
1151 GGATTGTCTG GCTAACCCAG CTGTTCCCTG GGGCCAAGGG ATCGACATCC
1201 AGAGAGCTCT GCAGCAGGTG CGATTTGAAG GTTTAACAGG AAACGTGCAG
1251 TTTAATGAGA AAGGACGCCG GACCAACTAC ACGCTCCACG TGATTGAAAT
1301 GAAACATGAC GGCATCCGAA AGATTGGTTA CTGGAATGAA GATGATAAGT
1351 TTGTCCCTGC AGCCACCGAT GCCCAAGCTG GGGGCGATAA TTCAAGTGTT
1401 CAGAACAGAA CATACATCGT CACAACAATC CTAGAAGATC CTTATGTGAT
1451 GCTCAAGAAG AACGCCAATC AGTTTGAGGG CAATGACCGT TACGAGGGCT
1501 ACTGTGTAGA GCTGGCGGCA GAGATTGCCA AGCACGTGGG CTACTCCTAC
1551 CGTCTGGAGA TTGTCAGTGA TGGAAAAATAC GGAGCCCGAG ACCCTGACAC
1601 GAAGGCCTGG AATGGCATGG TGGGAGAGCT GGTCTATGGA GTAAGTTCAC
1651 TGCAGGGTGG GAAATTAGAG GGCGGAGCCA GAGGGTTTGA CAGGAAATCA
1701 TTTGGTGGTT GGGTGGCCCT GCCCACAGAT GTCTATGAAA CCCTGTAATT
1751 GAGTGTTGTT GCTGCTGAAC AGATGAGTCA TCCAAAATCC AATTTCTTCA
1801 GACACTCTTT GTTCAGGTTA CTGGTCCCAG GTCCCTCAAT CCCACTCAGA
1851 GTCTTGTGAC GTCAGTTGAT TGTCGTCCAA CACAGGTGAC AGCATAGCTC
1901 CAAGATCAAT TTTCTTGAGG CAGACTGCTG AGTTGTCTAT ACAAAGTCAC
1951 TTGTGGCTCT CTCAGTATCA GTTTCTTCTC TGATATTAAA TGCATCTGGA
2001 GCCAACCTAA CTTTCTAGTT ACTTGCCTCT CTAGTTTCAT GCTCTCTCAT
2051 GAAATTTCCA ATTCAGTCAA ATGCCCCTTA ATTACTCTGT TCCCTAGAGT
2101 GCTCCCTTCC ACTCTCCACC CCTAAGATAC TACTCCTTCA AAACCTATAT
2151 CAAATAATAC TTTTTTCAGG GTGTGTTTCT TTCTTTCTTC TCATAATAGG
2201 TATGAATGTG CCTTTTAATT GTTCTCGCCT TCCCCTATAG AATTTAGTTG
2251 CTGGTTTTTT TTAATGGTTT ACCCTGCCTT ATATAACGGT TACCTGTGTA
2301 ACAGGGGTAG GACTATTCTA TCTTTATAGT GCTCACCACA CTTGAAATAA
2351 CTCCATGCAC AATTGCTATA AAATCTTCAA TAAATTACAG CAGTTTTGAA
2401 AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAA
   (SEQ ID NO: 1)
```

FEATURES:

5'UTR: 1 - 188
Start Codon: 189
Stop Codon: 1746
3'UTR: 1749

HOMOLOGOUS PROTEINS:
Top BLAST Hits:

Sequences producing significant alignments:	Score (bits)	E Value
CRA|18000004891320 /altid=gi|106114 /def=pir||A41273 glutamate ...	998	0.0
CRA|18000004924128 /altid=gi|183281 /def=gb|AAA58613.1| (M64752...	998	0.0
CRA|18000004904030 /altid=gi|478699 /def=pir||S25852 glutamate ...	996	0.0
CRA|18000004891322 /altid=gi|4504113 /def=ref|NP_000818.1| glut...	996	0.0
CRA|18000004904031 /altid=gi|481504 /def=pir||S38723 glutamate ...	990	0.0
CRA|18000004938820 /altid=gi|6680087 /def=ref|NP_032191.1| glut...	984	0.0
CRA|18000004967647 /altid=gi|227246 /def=prf||1617121A Glu rece...	984	0.0
CRA|18000005162807 /altid=gi|3402257 /def=emb|CAA35050.1| (X171...	982	0.0
CRA|18000004967543 /altid=gi|279674 /def=pir||ACRTK1 glutamate ...	979	0.0
CRA|18000004936319 /altid=gi|202868 /def=gb|AAA63479.1| (M38060...	979	0.0

EST:

Sequences producing significant alignments:	Score (bits)	E Value
gi|12445102 /dataset=dbest /taxon=96...	1023	0.0
gi|8061803 /dataset=dbest /taxon=960...	690	0.0
gi|12066444 /dataset=dbest /taxon=96...	373	e-100

EXPRESSION INFORMATION FOR MODULATORY USE:
gi\|12445102 placenta
gi\|8061803 /nervous
gi\|12066444 brain

Tissue Expression:
hippocampus

FIGURE 1, page 2 of 2

```
  1 MQHIFAFFCT GFLGAVVGAN FPNNIQIGGL FPNQQSQEHA AFRFALSQLT
 51 EPPKLLPQID IVNISDSFEM TYRFCSQFSK GVYAIFGFYE RRTVNMLTSF
101 CGALHVCFIT PSFPVDTSNQ FVLQLRPELQ DALISIIDHY KWQKFVYIYD
151 ADRGLSVLQK VLDTAAEKNW QVTAVNILTT TEEGYRMLFQ DLEKKKERLV
201 VVDCESERLN AILGQIIKLE KNGIGYHYIL ANLGFMDIDL NKFKESGANV
251 TGFQLVNYTD TIPAKIMQQW KNSDARDHTR VDWKRPKYTS ALTYDGVKVM
301 AEAFQSLRRQ RIDISRRGNA GDCLANPAVP WGQGIDIQRA LQQVRFEGLT
351 GNVQFNEKGR RTNYTLHVIE MKHDGIRKIG YWNEDDKFVP AATDAQAGGD
401 NSSVQNRTYI VTTILEDPYV MLKKNANQFE GNDRYEGYCV ELAAEIAKHV
451 GYSYRLEIVS DGKYGARDPD TKAWNGMVGE LVYGVSSLQG GKLEGGGRGF
501 DRKSFGGWVA LPTDVYETL
   (SEQ ID NO: 2)
```

FEATURES:
Functional domains and key regions:
[1] PDOC00001 PS00001 ASN_GLYCOSYLATION
N-glycosylation site

```
Number of matches: 6
      1       63-66 NISD
      2      249-252 NVTG
      3      257-260 NYTD
      4      363-366 NYTL
      5      401-404 NSSV
      6      406-409 NRTY
```
----
[2] PDOC00005 PS00005 PKC_PHOSPHO_SITE
Protein kinase C phosphorylation site

```
Number of matches: 5
      1       71-73 TYR
      2      206-208 SER
      3      306-308 SLR
      4      315-317 SRR
      5      453-455 SYR
```
----
[3] PDOC00006 PS00006 CK2_PHOSPHO_SITE
Casein kinase II phosphorylation site

```
Number of matches: 6
      1      135-138 SIID
      2      164-167 TAAE
      3      179-182 TTTE
      4      180-183 TTEE
      5      279-282 TRVD
      6      413-416 TILE
```
----
[4] PDOC00008 PS00008 MYRISTYL
N-myristoylation site

```
Number of matches: 7
      1       14-19 GAVVGA
      2       29-34 GLFPNQ
      3      247-252 GANVTG
      4      348-353 GLTGNV
      5      398-403 GGDNSS
      6      495-500 GGGRGF
      7      506-511 GGWVAL
```
----
[5] PDOC00009 PS00009 AMIDATION
Amidation site

```
          358-361 KGRR
```

Membrane spanning structure and domains:

Helix	Begin	End	Score	Certainity
1	3	23	1.803	Certain
2	95	115	1.636	Certain

FIGURE 2, page 1 of 2

BLAST Alignment to Top Hit:

```
>CRA|18000004891320 /altid=gi|106114 /def=pir||A41273 glutamate
            receptor precursor - human (fragment) /org=human
            /taxon=9606 /dataset=nraa /length=896
         Length = 896

  Score =  998 bits (2553), Expect = 0.0
  Identities = 484/484 (100%), Positives = 484/484 (100%)
  Frame = +3

Query: 189   MQHIFAFFCTGFLGAVVGANFPNNIQIGGLFPNQQSQEHAAFRFALSQLTEPPKLLPQID 368
             MQHIFAFFCTGFLGAVVGANFPNNIQIGGLFPNQQSQEHAAFRFALSQLTEPPKLLPQID
Sbjct: 1     MQHIFAFFCTGFLGAVVGANFPNNIQIGGLFPNQQSQEHAAFRFALSQLTEPPKLLPQID 60

Query: 369   IVNISDSFEMTYRFCSQFSKGVYAIFGFYERRTVNMLTSFCGALHVCFITPSFPVDTSNQ 548
             IVNISDSFEMTYRFCSQFSKGVYAIFGFYERRTVNMLTSFCGALHVCFITPSFPVDTSNQ
Sbjct: 61    IVNISDSFEMTYRFCSQFSKGVYAIFGFYERRTVNMLTSFCGALHVCFITPSFPVDTSNQ 120

Query: 549   FVLQLRPELQDALISIIDHYKWQKFVYIYDADRGLSVLQKVLDTAAEKNWQVTAVNILTT 728
             FVLQLRPELQDALISIIDHYKWQKFVYIYDADRGLSVLQKVLDTAAEKNWQVTAVNILTT
Sbjct: 121   FVLQLRPELQDALISIIDHYKWQKFVYIYDADRGLSVLQKVLDTAAEKNWQVTAVNILTT 180

Query: 729   TEEGYRMLFQDLEKKKERLVVVDCESERLNAILGQIIKLEKNGIGYHYILANLGFMDIDL 908
             TEEGYRMLFQDLEKKKERLVVVDCESERLNAILGQIIKLEKNGIGYHYILANLGFMDIDL
Sbjct: 181   TEEGYRMLFQDLEKKKERLVVVDCESERLNAILGQIIKLEKNGIGYHYILANLGFMDIDL 240

Query: 909   NKFKESGANVTGFQLVNYTDTIPAKIMQQWKNSDARDHTRVDWKRPKYTSALTYDGVKVM 1088
             NKFKESGANVTGFQLVNYTDTIPAKIMQQWKNSDARDHTRVDWKRPKYTSALTYDGVKVM
Sbjct: 241   NKFKESGANVTGFQLVNYTDTIPAKIMQQWKNSDARDHTRVDWKRPKYTSALTYDGVKVM 300

Query: 1089  AEAFQSLRRQRIDISRRGNAGDCLANPAVPWGQGIDIQRALQQVRFEGLTGNVQFNEKGR 1268
             AEAFQSLRRQRIDISRRGNAGDCLANPAVPWGQGIDIQRALQQVRFEGLTGNVQFNEKGR
Sbjct: 301   AEAFQSLRRQRIDISRRGNAGDCLANPAVPWGQGIDIQRALQQVRFEGLTGNVQFNEKGR 360

Query: 1269  RTNYTLHVIEMKHDGIRKIGYWNEDDKFVPAATDAQAGGDNSSVQNRTYIVTTILEDPYV 1448
             RTNYTLHVIEMKHDGIRKIGYWNEDDKFVPAATDAQAGGDNSSVQNRTYIVTTILEDPYV
Sbjct: 361   RTNYTLHVIEMKHDGIRKIGYWNEDDKFVPAATDAQAGGDNSSVQNRTYIVTTILEDPYV 420

Query: 1449  MLKKNANQFEGNDRYEGYCVELAAEIAKHVGYSYRLEIVSDGKYGARDPDTKAWNGMVGE 1628
             MLKKNANQFEGNDRYEGYCVELAAEIAKHVGYSYRLEIVSDGKYGARDPDTKAWNGMVGE
Sbjct: 421   MLKKNANQFEGNDRYEGYCVELAAEIAKHVGYSYRLEIVSDGKYGARDPDTKAWNGMVGE 480

Query: 1629  LVYG 1640
             LVYG
Sbjct: 481   LVYG 484 (SEQ ID NO : 4)
```

Hmmer search results (Pfam):
Scores for sequence family classification (score includes all domains):

Model	Description	Score	E-value	N
CE00269	CE00269 kainate_receptor	646.8	1.1e-190	1
PF01094	Receptor family ligand binding region	101.4	1.4e-27	1
CE00294	E00294 glutamate_receptor_6	47.5	5.9e-14	1

Parsed for domains:

Model	Domain	seq-f	seq-t	hmm-f	hmm-t		score	E-value
PF01094	1/1	55	391 ..	56	464 .]		101.4	1.4e-27
CE00294	1/1	347	479 ..	376	507 ..		47.5	5.9e-14
CE00269	1/1	21	484 ..	42	544 ..		646.8	1.1e-190

FIGURE 2, page 2 of 2

```
   1 TTCAAAGTAG TAAGATACAA AAACTGAAAA TGGAGAAATT AAAAGATGGA
  51 ATCATTAAAT CAGAGACTCT TAATGTTGGC AGAGACCTTA GAAGTGATCT
 101 TTCCTGATTC TGTTCTCTCA TCTTCCTATG CTGATGCTTA TTCTTCCTTT
 151 AGAAGGTTCC TACCCAGTGC TTGCTGTTAT TAGAGCCTAA GAGTTAAGAG
 201 CTGGGGCCTG ATGGTGGCAT TTACTGTGTT TAAATGCCCA ATCTCTTTCA
 251 TTAGCAGTGA AAACTTGGGG TGAGTTTTTA GACCTCTGTT TCTTCATCTA
 301 TAAAATGGGC ATGAGGCTAC CTACACAGGT ATTGTACAAA TAAATGATGC
 351 AGGTGCATTT CTTAGCATGG TACCTGGCAC ATTCAAAATA GTGAATAAAC
 401 ATTAGCCTTA AAAATTATTT TAGCTAATTA ATTAATATAT GTGAAAGTGC
 451 ATAGGAAATC ACAAAGCATT TGACCTCCAA GTTGTTCCTA TTTTGGGGCT
 501 TCATTGTACA TGGTCAGATA TTTTTTACAA ATCCCAGTCC TTGTAGCTGT
 551 CACTCAAGTC CACATGATAT ACAGTCCTGG TGAGGGAAGT GAAGAGTCTG
 601 TGGATAAAAT GGCCTATTCA TATGGCAAAG CAAAATGGAG TCCAAAGTCT
 651 ATTATTTCTT TCTTACTAAA GACAAAGTTG ACTTTCCTTT TCCTGGATCA
 701 TCTCCTGTTG GACAGGAGTC CTGGCCAGGG CAGTAAGTCA ACTGGTAACG
 751 GCCAAAGCAC TCAAGTTTGT AGGTTGTACT GTACATCTTA GTAGGTCTGT
 801 GTCTTTATGA CTTAATCCCA GAAGTCTTAT CTTTTTCATC TGTAAACAG
 851 GGCTCATGGC CACTTTACAG GTTTGGAGTG AAGATAGATG GATAAAAATC
 901 TGTAAAGTTC CTTCAAAAAC TGTATTCTGT GGCGGCTAGT GGCTGCTGCT
 951 TTGCATTTAA CACTACTATC CTGAACACAG CTGATCTCTC TACAGGTTAT
1001 TTCAGCAGAA GCCCTGGTCT AGGAGAGTCT ATGAAGTTCC AGCTTACACC
1051 AGACATGACC AGCATCCAGA AAGACCTGAA AGAAGCTTGA ATCCTCTCAC
1101 TAGAATCCCT GCAAAATGAC TCATGTAATT GCTCTGTGTA AGTATCCTTA
1151 GTCTTTATTG TACACCCACA CGATTCTGAT GCTATAGACT CCTGTGGAAT
1201 GCAGGGAAAG AGAGAAGGGG GCCCATTTTA AATGCCTAGG ATTGAAAAGA
1251 GACCACCGTT TCACTTGTAA AGGTAGACAG GGACTGTCAA ATACCTGGTC
1301 AAAATACCTG CCAGTCACTC CAGATCCTCC CTTGTTTGTC TATCTGTCAT
1351 TCCTTCCATT AGGAGAGAGA AAGCTTTTTT TTTTTTTTCC TTTAAATTTC
1401 CTAGGAGGGA TTTCTAGGGT CTTTCCCTCA GGAATTAGTT GTAGGAATAA
1451 TTGGGCCAGT GGAGTGCAGG AGATATATCC AGCGCAGCCC ATGCACTCCT
1501 AGAAAAAGTG ACCTAGATCA AGCAGCTGGT GGATTGAGGA CTATTGTGGG
1551 GACCCCCTGC CACCTACTGA CTTACAGCTG AACCCACATT CCCAGCAGCT
1601 TCAGCCTGGG GGCTGGGGGA GCGGGCAGAC CGAGCTCAGA AAGGCAGGGG
1651 AGGGTAAAGA GGACTGTGGG GTTGCCCCTT TCAGGACCAA GTGCCACGTG
1701 TCACACACCC CCACCTCCAC CTTTCTGCAC ACACAGAAAG GAGGATAAGG
1751 TGAGGATGGG AGGAAGGGGG AACAGGTAGG GAGGTCGGCT GTGGAACTCC
1801 AAGCTAGCTC GGTGGGTATT AGCATAGAGC TTGCTGCCTG TGTGAGTGTG
1851 AGGGGGAGAG CGAGAGAGAG CAAGGGAGGG AGAGAGAGGC AGGCTGCGAG
1901 GGGAGAGGAG AGGGAGTGGG GGAGCCAGCG CTCCAGCTAG CATGAGGACG
1951 GGCTTCTTTT CCCGTGCTCA GTTAATCTGG CTGTCAGTTG GTGTTAACGC
2001 TGCAGTTTAA GTGTTCGGAT TCCAAGGGAA ACAGACAAAC CTCACGAAAG
2051 GAAGGAAGCA AGCAAGCAAG GAAGGAACTG CAGGAGGAAA AGAACAGGCA
2101 GAACAGCGAG AAGAATAAAG GGAAAGGGGG GGAAACACCA AATCTATGAT
2151 TGGACCTGGG CTTCTTTTTC GCCAATGCAA AAAGGAATAT GCAGCACATT
2201 TTTGCCTTCT TCTGCACCGG TTTCCTAGGC GCGGTAGTAG GTGCCAATTT
2251 CCCCAACAAT ATCCAGATCG GTGAGTGAGG GGGCAGCCTG GGGAGGGACT
2301 TTCTGGGTCT GGCCAGGGAT TTTTTTGGGG ATAGGGGTTG TGTACCCCCT
2351 CCCCGGTACT GACTGTTTTG CTTGGCTCCC TAAAGCTGTG CTGCGGTAAC
2401 AGAAGGGAGA CTTGGGCTTA CAGCCAGAGG AGGGGGCTTC TCCTGATCGG
2451 ATGAGGGGCA GAGGGGAAGT GTTCACACAC GCACACATAC CCTACTCGCA
2501 CTCCAGGCAA GAGCATGTGA AATGGAGGAA CCATCGCTTT GGAGGAAAAA
2551 AAAAATCAGG CTGGAAAGGG TGGTGGGTGT TTAAGGAGTT AACTCTATTG
2601 CTTGGTAGAT GGTGCTTGAT TCCATTTTTA ATGTAAGTAT GTATGGTGTG
2651 TGTGTTTTCA CGTGTGTGAT TATATATTAC ATATGCACAT ATATATGTAA
2701 TTGAAGGAGG CAGTGCTTTC TCTGCTGGGG GACAGAAAAG AGACCCTCGA
2751 GAAGAAGGAG TGAGGGGTGC TGGGTATATT GCAGCCAACTG AAATAATGCC
2801 AGAAGGCCCC CACTCCAAGG CGGGTAGGCT CCCTCTCCTG TTCTGGACTC
2851 CTCCAGCTGC CTTCTCTTTG CTGTCTGCCA TGCTGCGCTG GTGGTCTCCA
2901 CTCCCCCGAT CCTGGAACTT CCTCGCCTGC CTTTTCTCCG TTCCTTCCTT
2951 GCCCCCTCCT CTTAGATTTC CTATCCACAG AGGTCTACCT TTTACACACA
3001 CAAACACACA CACGTACACA TGCTCCTTTC TCCTCCTGTT GGCTCTCCAT
3051 TATCCTTGTT ACTGGGCTCC ATCCTCTCAA CTTGGAGGCA GGTTTCAACA
3101 TGCTGCATGC TTTTTTTGTT CCCCATTTCC CCTTCTTAGT TGTTACACTT
3151 CTCAAAGGCC CCGCCACCCT CCCTGTATTT CTGAGGGGAC TGACAGATAT
3201 TGCTACTCCT GATAATCATG AGGGAAAGCA AAACAAACAG AAGCAATAAC
3251 ACCAATCACA AAGCATGTCC ACAAGGGCTT GGGGCTTCCG TGTGACCAGC
3301 ATGTCAGTGT CGTTTGTGTC CCGGAATGAA GCAAGCTGCT GTGTTTGGAA
3351 GCATCTTCGT TGGTTTGGTT CTAGTCTCT CTCCCCTGGT AGGGAGATAG
3401 CTCCACTAGG GAAAGTTCGC ATTGCTGGGA GTTTGTGCTC TTTTGTGAGT
3451 GTGTGTTTGA GGGGGGATGT GGTGCAATTG ATATTTTGTC GGGCATACAT
3501 GTGCTGCAGT ACCCATCTCT TTCAGCCTCT CCAGCTAGCT GGCGGCTTGG
```

FIGURE 3, page 1 of 122

```
3551 AGTGGCCATG GAGTAACTTG CTTTGTTTCC TGACACCTGT TAAGCTACAT
3601 CCTGAAGTGT GTACGTATCT GTGTGTTAGT GCCTAACACG CAAAACTTCC
3651 TGCCTTCAGG GGAGACACTT CCCTTGTAGC CCAGCCCGTA GCCTTCTACT
3701 CCTCAACCTC CCATCCTTTC TCTTTCATTC ATTGCAGAGG AGGAGAAAGG
3751 GGACAGGGAA GTGTTTGGGG TGTGGTCATC TGGGGGGAAG GGGGAGGCATC
3801 ATAATCAAGA ATTTTTTTTG TTTTCATTCT TTAAAATGGG AGCACTTGTA
3851 CATGTGGAAA TCACTGGCTC TTACATGTGG CATTGTTTAC ATTTGTGCTT
3901 ATATACTACC TATCCTTTGT GGCTTGGAAG TGTTTGTCTA GTATATTTGT
3951 GTATATAGTA AATGGTATAA ATGCATGAGG ATGTTTCATG TATGTGCTAT
4001 GTTTTCTCAT GTATCTCTGC ATATTTTTAA AATTATATTT AGCCCTAACT
4051 TGGTTGTTCA ACTGATAAAG CCATTGCTAC TGTTTTCAAA AAAAAAAGAG
4101 ATTGAAGCAT TAAATTGTAG AACAAAATGC TGAAAATATC ACTGCCATCA
4151 GGTAGTACTT GATTCTATTT GTGTGATCTG TAACAAAAGG CTTGCAATCC
4201 ATTTATTGGT TCTTAAAAAC AGACACCCAC TCTACAAGAA GTTAGAAGTG
4251 CATTATGTTT GGACTGTGAT TACTGTCAGA TTTGAGATAA ACTTCTATGT
4301 AAACATCATT ATAGTTCAGT CTCTAGAAAT GGCTGATTTT AATTCACAGA
4351 AATGTAATTG ATTTACATGT TGACAGTAAA TACAAAGGTA AGCCATGGAC
4401 TCTTGTTTCT CGGAACAGGC ATCCCATCAG GCACCTTTAC TATACCTTTT
4451 ACTAGAATAG AATGTTTGTA TCCTCTTGAG ATGCCTAAGA TCCCACATCT
4501 TTGAAGCACA AGGTTCCACC ATGCAAACAC ACAATGGCAA TCCCTTATGT
4551 AACAAGTCAT TCCTAGGTAA CTGGGATCAT GTGTGGTGAA AGAGTAAGCA
4601 AAACATTGTT TGCAGAAAAG CAAGAGTTTT TAGAGAAAAT GAATAATAAA
4651 CCTTAGGGGC AATAGAATAG TTAAATTGCA TGCAGGTCTT GCTAGGCCAA
4701 AGACTAAAAA CTGTCCATGT AAACAGTTAT AGTAGTGGAG AAGCCCACAG
4751 GGTCCCAGAG CTAGATTTCA ATCACCCTGC AGCACTGATT AGTACCTACT
4801 TCCCGTAAGG CTCTCTGGTG AGAGATGAGG CTGATGTAAG AAAAATTAGA
4851 CATGACTAGA GGGTGAGGGG GCTTATGTGT ATGTTTATAT AAGAGAATAG
4901 CAGCTCCTAG GTGGTTTGCA CAAGGGAGGA AGAAGAGAAA TGGCACAAGT
4951 CTCCTGTTTT CTCTGACTTT AGCTGAGTTG AGGGGTACAC AATCAAATGT
5001 TTGAGCAAAG TAATAGATAT TAGAGGCCCA TGTCACAAAA AAGCTCATCT
5051 GTAGGAGTTT AAGTTTCAGT GTCCAGTTAA GCCTATTTGA ACTCTCATCT
5101 CTACCACTCA AGGCTACAGC TAGTGAGTTT GGCATGGGGA GAAGAAAAGG
5151 ACTCATCTGG AGTGAGTCGT GAGGAACTAA AACCTGTCTC TAGCCCATAT
5201 ACCATGTTGC ATTTTCTTTT CTCATAGGGG GATTATTTCC AAACCAGCAG
5251 TCACAGGAAC ATGCTGCTTT TAGATTTGCT TTGTCGCAAC TCACAGAGCC
5301 CCCGAAGCTG CTCCCCCAGA TTGATATTGT GAACATCAGC GACAGCTTTG
5351 AGATGACCTA TAGATGTAAG TAATTGCTTC TATTTCTGAG ATGTCTTTCT
5401 GCGCTAGACC AATGAAAGGA GGGCCTGTGG GTAGGTGGTG GTGTTGCAAA
5451 AATGACTTCA GTTGCCATTC GTCTTTGTAA GAGAAAGCCC TCCAAGAAAA
5501 ATTTCTAGAG GCTTCTGAGT GATTCCAGCA GTTGGCATTT TAGCCCCTGC
5551 AATGCTTCAT GTAATGGATT TGCTTTTTCA CTGTCAGCTA ACTTTAATGC
5601 CAGCACGATG GGGTGCTTGGG TTGACTGCAT CTTCCCTACC TTGCAGAGGT
5651 TTTCTGGCAC AGCTGAGAGA GTTTTACACA TACGAATCTT CTGAGAGGCA
5701 TAGAATTAAG GGTCCTGAGT TTGTGAAAAT GTGGTTTAAA GTGCTTAAGG
5751 CATTTCCTAT CTACATGTTA AATGGACAGA ATGTAGCTTG ATAAGAAATA
5801 ATAGCTGAGA AGTTGTACAC ATCTGGTTCT TCATTTTCGG AAGTGACCAA
5851 TAATTAAAAC TTGGTGCCTT GGTCATTTTA AAAATAGCTT GAGGAAATTG
5901 GTTGTTTAAG GCACAGTTTG TAGGATGGTC ATTGAGCATC AAACAGAACA
5951 AAGGTGGCCT CAAGAAGAAG GGATAGAATAA ATCTCTGACA TCTGAATTGA
6001 ATGCATTGTA AAATGTGGGC AACAAACACC ATTCTGAGTT TTCCTGGCAA
6051 CTAGGAATGA AAAGGAAGCC TGTGCTCACA TGATTGGCTT TTCATGACAG
6101 ATGAAAGCAT AAAAATTAAT CAGGAAACAT ATTTTCCCTT CAGGGATTAA
6151 GCTCAAGTAA AAATTTATGG CAGGGAAATG TGAGCTGAAT TCACAAGAAC
6201 AATTTGAGAC CCCAAACTGG ATTGAATTGG CACGATAGTC TTGGTGTGTC
6251 ACTATTGACT TGGTGACTTC TGCTGAGCTG TCTCTGGTGG AAGTCATGGA
6301 CCATATTTCC TTTGTGTCTT TCTCTCAAGTC CCACTGGTGA GTTCTCAATG
6351 ATTTGAATAG GCTATGCTTT GAAGTCTCAA AATGAGAAGT CAGAATTCTT
6401 TCTATCCCAA AGACCACTCC TAAAATAATG TTGTTACAAA TTCCAAGAAC
6451 TATAATTATA GCAGATTTCA TTTATTGAGA ACTTACTGTG CATCAGAACT
6501 ATGATAAATA CTTTATAGTC ATTTATAGTC ACATTCATTA CCATGTATTA
6551 AGCACTGACT ACAGCCCATG TAATGCACTA ATTGCTTTTT ATGTGTTAGC
6601 TCATTTAATC CTCACAGGAG CTTTGCAGAG TACTAGACAT TATCTTCCTT
6651 TTAGAGATGA GAAAACTGAG GCTACAACAG ATTATATAAC TTGCCCAAGG
6701 TTACTCAGGA AGCAAATGGT GGTTTTGAGA CCTGAAGGTC CATGTTCCTG
6751 GATACTGTGA CAGATACACT GATTCTTATG GTACCCTAAT CAACTAGTGG
6801 GATTACCCAA GAAATGAAAG GGAATTTTCA GGGTCTTGTA AGGCAGAGGT
6851 CTAATAAAGT ACCTAAGGAG AAAAACTTAC AGTGTTTCAA ACTGTAGCTA
6901 TGATTTGCAC AGGACTGGTC CATTGAATAA ATAAAATAGC AATTCTTCAT
6951 TTTGGTAATG CTGAGGTTGA AAATCTTATC TACTGTGTTA CTCACTACCC
7001 TTAAAAAAAT AGCTGAAGTT TAATTGCTGA ATTTTAGTTC TATGAAACTA
7051 TCTTTCTGGG AATCTAGAAT AATACTGAGT AGCTATTTTG CTATTAGATA
```

FIGURE 3, page 2 of 122

```
 7101 ACCTTTCTTT ACTTTTTAAT GTGGCTTTGA TTAGGGTCTT TGGAAGGGGC
 7151 ATTTGGTTGG GGGCATCAGT GTACCTATAA ATGTTTAAAC GCATATACAT
 7201 GTGCTAATTT ATTTCCTGGA GCAGGGCTCC ATAGCTTTTG TCATACTTTA
 7251 TAGCTTTTGT ATTACTTGCA TAGAGAATCA AGAATAAATA GCTGGTGTGT
 7301 GTATTCACTC ATGCTGCTGA GAAATATCTA CAGCAGGTTT TGGTTGAAAG
 7351 AGATGTGAAC TGCTCTCCTA GTAGTGTCAA GATGTTGACT GGCACAGCAA
 7401 GAAAATAAAA GACAAAAATA GGAGAAAAGG TTCTAAGGCA AAAGGTGGTG
 7451 CTTCTGTCTT GTTATCTCAG CAACCTAAGA CTTGATCTCT AATAGGGTTA
 7501 ATGACTGTTT ATTAGGGAGA CAGAAATATG ATACAGACAA TGTTGTTCAT
 7551 TTTGGTCAAC AGGCCTGGAG TGGATGAATC TGAGTTCTTG AACTTGATGC
 7601 TGCCATCCAT GAACTAGTGT ACAGGTTTCC ATGAATTCCT GTCTTGTTCG
 7651 TTCAGTTAAT TCTTTAAGTG TTTCTTCAAA GCTATAAACT GAAATAGATA
 7701 TTGGAAATAC AGAGATGATA AAATGCCCTT GCTCTCAGGT AGCTTACAGT
 7751 CTAGTGGGAA ACATTGTTAT GGGGATTATC TGAGAAGCAA TAATCTTATT
 7801 TTGTGCTTAG ACTTTGTGTT TCTTTTCTTT AGCTCCCAGA TCCCAAAGGG
 7851 GGTACTGGGC AAGTTAGGTG GAAATGGTGG CCTGGCTGGA GGAGCCTCTC
 7901 TTAAATTTCA TGTAAGGCTA GGAATACTTT AGGGCTGTGT TCACTGTGGT
 7951 CCATTGGTTT GGGAAAACTT TACATCTGTC CCAATTTTAA TTGAGTAAAA
 8001 AATGTCAGTG GGAGCAAAGC AGTTTTAGGA AGAATGTACT CATTACTGAT
 8051 ACATGGAAAA GCAAGAAAAG CATCTTATTC AGACTAATTT TCTGTGCTGT
 8101 GTTTTTTGAA ATCTGAATTA GTAGTTGCCT TAAATTAACT GCCCAATAAG
 8151 TCTTAGATCT AGAAAATGAC CAAATTTTAT TTGTTTTTTT TTCATAATTT
 8201 TTGCTGTCAT TTGATTTTTT CCCTTTGCAT TTTGCTATTC ATTGTCCCTC
 8251 CACCAGAGGG TGGAGAAGGG AAGGGAGAGG AAGTGTAATG GGACCTGTTC
 8301 ATGCTAGACA TGTTAGCAGC AGGGGACTAA AAATGAGGAG AGGTGGTTAT
 8351 ATGGTAGGGA AGGTGGGGAA GATAGAAGAG GACTATGGCT ACTACTACTG
 8401 GCCAAGGTGA GAGTTTGGTG CCTTCTTCGT GTTCAATCTT TCTTGCTTCC
 8451 CTGGTCTGCC ATTGTTAAAG AGTAAAGCCA TTGAATCAGC AACCCAATGC
 8501 CTTGGGATCT CCTTTAAGCA CTTTTCCAAG CTTACAGGGG TAGAGTTTGG
 8551 GGAGATTGTG CATAGAGAAG ATATTTACTG ATCAGCTACC CAGCTTATTT
 8601 TGGTGCCTTT GTGGTAAGTG TAAATAAAGG AATAAATGAA ATGCTGATTG
 8651 AGATTATTAC TATTAGAGGT CTGAGTAGCA TAGTTGCAGC TTAATTCTTA
 8701 CCTTTTAATT TATTCACCTA TTTATTCATT CATTCATTCA GCAAGTATAT
 8751 ACTGAATGCC TACTTCATGC CAAACACTGG GCCAGACGCT AGGAATATAG
 8801 GGGCCAGGAA AGAAGGCACA GCCTCTTTCC TTGTGGAGCT AACAGTTTAG
 8851 CCCAGAGGTT CACAAACTTC AGTGCACTTA AAATTCACTC AGGGAGCTTG
 8901 TTTAAAGCAA GACTCATGAT GAACTTTTTA CTTCTTGAAT CAAGATATTC
 8951 AAGAGTAGGC CCTGGAGGAA TTCTATAGCA ATTATTATGG GGATTACACT
 9001 TTAAGAATCT CTTTAATCTA AAAAGTCTTC CATCCCTTTA GTAAGCATTT
 9051 TTGAGCCCTC AACCAAACCT AGGCATGACA TAAAGTGCTA CAAATGCAGA
 9101 CAACAGTAAG TTGCATTCCC CACCCTGGAG TACTTTATCC ATAGTAAGAC
 9151 ATTTTCTATC CTGTAAAGAG AAAATTAAAA TGTAATGTTG TAAGTGCTAT
 9201 AGCAGCAATT TGTATGGAGT ATTGAAGATT CCTTGAAGAG TGGAGTTTTT
 9251 CTCTAGGAGG TGGTGATTGA ATTGAGCCTC AACGATAAAT AGGGTTATCT
 9301 ATCTGCAGAA GGGGTCACCA AATATAGCCA TCCACAAGCC AGTTCCAGCA
 9351 CAGAGACTGA GTTCTGGGCC CATACACTGT GTAAGAACCA TGGAATTTCA
 9401 CATTAGAACT TGGACATCTT GTCTTGACTA ATATTTTTAA ATATTAAAAT
 9451 ATCTGGCAAC ACTAGGGCCC AGGTCTATGC AGCCTCAATT TGCTGAGATG
 9501 GGACAGAGTA AACCCCATCT ACATGGCCTC TTTCCCAATC AGCCCATTCT
 9551 TCCCATTTTC TTTACCTGCT GGCTTTGGCA AGCATTGAGT TTGCAAGCCC
 9601 TGATTGATAG CACTGCAATG TTGTCTGTGT TGTGTCTTTA TAGGTTAGCT
 9651 TCACCACCAG AATATAAACT GCTGTCAGAA AGACCATGTA TATCTATAGT
 9701 TTAGTGTTGA GAACACTTGG AAATGCCTCT AATACAAATG AATAAATGTC
 9751 TGTAGGAGTC AGGGAATTAC ACAGCATAAA AATGTTCAGA GCCTCAATGA
 9801 CAATAGGTGA AAGGTAGCAA CCCTAACTAC AGTGGGATGC CCTCTGTCAT
 9851 GGACCTACTG GGGAAGCCCA GGGGCTTCCT AACAAGACAT TAGGCACTGG
 9901 CAACAGAGAG ATGGCCTTAG CTCTTGCCTG AACATGGCTC ATCAACTTCA
 9951 GAGTTGCAAC ACAGATTTGT TTTTCTTGAC CTACACAATG CTTTTTCATA
10001 TTTGGCATAA AAATCCAGAT TTCTGGCATC TTTAAAAAAA AAACTTAGGG
10051 CATTAAGCAA CCCTAGGCCC ACATTCCTGC TTAACTTCTA TTTTCTAGAG
10101 CTGAGAAGTG CTGCCCTTTT TAAATACATA AACTCCCAAG TTAACCAAAG
10151 TTTCCATTAC TTCCTGTTTG ATTGCTAGAG TAATCAAATT ATGTTGTTTG
10201 GGCAGGCCTG TAAGTAGGCC AATCTACTCA TACCTGATTT ATATCGTCAG
10251 CATTCATCAT TTTATTATTT TGTTCTAATA ATATCTATTA CTTACCCTGT
10301 CAAAAATAAT AAAAGACACA AAAGATGTAT AACTCCTACT CTCAAAAAAA
10351 GTAGTGTGTA TACAGTAATG AAGAGAATGG TGGCTGATGG TGGGATAAAC
10401 AAGAATTATT TTGAAGACCT ACTATGTGCC AAATACTTTG CAGGTGTTGT
10451 CTTAAGTTTT ATAACTGTCT TGAAAGGTGA TTATCCCCAT TTCATTGATG
10501 ATGGTACTGA GACTGAGAGA GATTGTGTCT TCTTTATATT ATGCAACAAA
10551 TAAAAACCTA AGCTAGTATT TAAAGCCAGT TTGGGGGGCT CCAAAACTCA
10601 ATGAGCATTC TCCTTTTAAA GATCTATGAA TATGGCCAGG GGCAGTGGCT
```

FIGURE 3, page 3 of 122

```
10651 CACACTTGTA ATCCCAGCAC TTTGGAAGGC CGAGGTGGGC AGATCATGAG
10701 GTCAGGAGAT TGACACCATC CTGGCTAATA CAGTGAAACC CCATCTCTAC
10751 TAAAAATACA AAAACTTAGC TGGGCGTGGT GGCACGCACC TGTAGTCCCA
10801 GCTACTCAGG AGGCTGAGGC AGGAGAATTG CTTGAACTCA GGAGGCAGAG
10851 GTTGCATTGA GCCAAGATCA CGCCACTGCA CTCCAGCCTG GCAACAGAGC
10901 GAGAATTTGT CTCAAAAAAA AAAAAAAAAA AAAAAAAAAA CCTATGAATA
10951 TATGGACAGA GAAAAGTACC ATAGCAGTGA AATAGCCCAA CGGTAGAAGT
11001 GTCACAGTGG AATTTATGAT TCAAGCTTAA GAGCTAAGTC TTCCAAGGCA
11051 GAAGCTATGA CTGTGGATGA TGAAAACTTC TTGGGGAAGG TGGAACTTTA
11101 GCAGGCATTA AAGGGTGGAG CAGATTTTGG TTGTGGAGTG GGAGGAGGGT
11151 ATTTTGAGTG GGTAAAGTCA CAATATTCCT CCTCGCCTCC CCTCAACCAC
11201 TGCTGCATAT GCTTGTTACC ATGTGGTGGA GATTTGGGAG TTTGCCTCCT
11251 GCACCACACT ATGTTCTCAG CTCCATGGCA GATGTCTACA TTTCTCTGGT
11301 TAATGTTACA GTCTGAAGTT GGCTCCTCAA TCTTCACCCG TGCCCTTACA
11351 TTAAGGCACA CAAGTGTTGA CATTTGTCTG TGGTTGACTC TTGGCTCTTA
11401 TTATAATATT GATAATCATC AGCTTTTATG GATAGAAAAA TCCTTGTAAA
11451 CATTTCTTTC CCTGACTAGT TTGAAGATCC TGCTGGGATG AGTGAGCTTA
11501 CTGCTCTCCT CTCAGCCACT CAGGATAAAG TGATCATATA GCACATTTGG
11551 AAAACTGGTA AGCTTCATGT ATTTGTTCAT TCATTCATTC ATCCGAAACC
11601 CTTTTATTAT CACCTTCTAT GGGGATATGT ACTGTCACTG CCCCACTCCA
11651 TACCTTTGTA GACAGCATTA GTTGATTACA GAATTTTTTC CCACTGAATC
11701 TACACGTGGC CTCAAATTGG TGACAGCTGA TGCAAGAGAT GAAATCCATT
11751 TTTCATTACA AGGCATTGCA CTAGAAATTG AGAAAAATAA AATGCATTAG
11801 GCATTGATTT TCCTCTTAAG GGGCTCAGGT TCTTATAAAG GAAATAGGCA
11851 TAAACCAAAT CTGCCTCTCT TTCTCTCTCT CTCTCTCTCT CTCTCTCCCC
11901 CTCTTACATA CACACACACA CACACACACA CACACACACA CACACACACA
11951 CATTCAGAGG AAGGAAGGAA AACCTTTAGT TGGAGGGATT TAGGTTTCAT
12001 AAAACAAGGA CATTTGAGTT GAATTTGGAA AGATAGGTAG GATGTAGATG
12051 GGAAAATATA TATGTATATA TTTGTATACA CACACACACA CCCCACACAC
12101 CTTCCTGTAA TGGCAGGTTT GATGCAGTAA ATAGCATACT GAGTTGAGAT
12151 TTGAAGACAT GGATTCAAAT GCTGGACTAC CTTCTTGAAT CGTTTAGGTA
12201 TAACCTTGGA GAAACATCCC CTCCCCCAAG CTTATTTATA AAATGAAGCT
12251 CATGGTCTCT GAGAGTCCTT CTGGGGCTGT ATTTCTATGC TGGCAGCATA
12301 TGGAAAACAC CAGAGATATA TGATTAATAG AAGTTCTCTA CCTTTGGCTA
12351 GCAAGAGGAT CCCTAAACAA GCTAAGTGTC TAAGGAAAGC TCTAGACTTC
12401 CCTTCCACCA ACTTGCACAT TCAGGGCGCA TTCTGTATGC AAATGCTGAA
12451 GCATTATGCC TACTTTGGGG CCTCAGATGA ATTCATTCAA TATTTAACAA
12501 ATATTTATGG AGTGCTTACT ATTGTGAACA AAACTAGAAA GCAGCCCTGT
12551 GCTCATGGAG CTCACCAGCT AATAAAGGAG GCTGCCATTA GATGATCACA
12601 TGAATGAGTG TATAGGTTGT AATAAACAAT CTGAAAGAAA GGGCCATGAT
12651 TCTATGAAAG CATATACAAA GGAACCAGCT CGTGCAGGAG GATGAATAGG
12701 TGCTTGAGCT GAGGACTGAA GGCTTTGGTG ATGCAGTGAT GGGAACAGGA
12751 GGAGTGTTTG AGAAGCTTCC TGGGCAGAGG CCTGGCCAGG CCTTGTAGGC
12801 TCTGTTATGG ATTTTGATCT TTAGCTCAAA CACTAAAGAA CCCATGGAAG
12851 GGTTTTAAGC AGAGAAGTGC CGTGTTTAGA TTTCTGTTTT CTCATCAGAA
12901 ATCAGATGCT TGATAGTACT TTGCCAAATT CACATTTGCT GAAGACGTCT
12951 GGCTTGTGTT TCAATGGCCT TGTTTCTTTA CTTCCATCTC CAGTTTGGGA
13001 TGGAGTCTGG CAGATGGGCA GGAGGATGGG GACAGAGGCC AGGGGAAAGG
13051 GAAGCTGATG ACTTGGTTTA GGGGTGCGTT GTCATGGTAT GTGGCTCTCT
13101 GTGTGCCCAT GGGCATTCCT GGAGATTGGA GGCTGATCCA GTGCAGTGCC
13151 TGGAGAACTG GTGAGGCTGT GTGGAGGCAG GGATTCATTC AGAGTCCTCA
13201 TTTATTTTAA CAAGGAAGAC ATACATAGCA CTGAAGCTCA GCCTCTGTTC
13251 CAATCAGACA ACTCAGTGGT CTTCAAATTC ACACTGCCAT TTCCTTCACT
13301 TACACTTACA AACTGCTCCT TCCATACTGC TCTGCTGAAA TTCTGTCCTT
13351 CTGGTCAGCC CTAGCTCTTA TTTTACCTTC TTCACTGAGC CTTTTTTCTC
13401 TTTCATATTC ACATGCTCTT CTGCCCTTCA GCTGTTTTTA CCATCTCCCT
13451 AGCAATGGTC ACGCTTATCC CCAGGTTTTA CTCACCTTGT CACTTGAACA
13501 CGTGTCTTAC CTGCCCAACT GGACTAAGCA ATGTGAGGTC AATGACCTTG
13551 TTTACTTTAG CTTCCCATCA CAGTCTCCAC CACAGTATAG TGTTCAGTGG
13601 TGCTAGATGA ATGAAAGAAT AGATGGCAGT GACAAGAATA AGCCTGAATC
13651 ATTGCTGCTT AGGGTAATGC TTTTGATATT ATGAGTTTTG AGAGTTCCAA
13701 CAGGCTGTGC TGTAAATACC TATGGATGGT TATTACTGTG TAGCTCCAAA
13751 GTTATGGGGG TGAAAATCAG GTGTAAGTCC AATTGAAAGC TCATTTTAGC
13801 TCCCGCTGGA CTATTGTCAT GAGGGGTCCT AAATAAGGTA TAAGGTTCCA
13851 TCTTCTAAAT AAAGAATTTC TGATTCAAGC CCTGGGTTTG CCATTGATGT
13901 ATGAGCCTTG TATGCATCTT ACGACTTTGG TGTGTCCCAG CCTGCTGTCC
13951 AGAAAGCACA GGGGAGCCCA GGGCCATGGG AGGTCCAGGT TGAGGAGGCA
14001 GGCAAAACTG GGCAAATGA GGCAGTTGGA GGCTAATGAA ATTGATACCC
14051 TATGGTTAGG CGTGTTTCCA TGTGTTCATT GTTTGGAACC TCTAGGATGA
14101 AAATAAAGTT TGAGAATAGC CTTTAGTTTG TCTACAAAAG TAATATATAC
14151 ATTACAGAAA GCTATAGGAA CAGAGACAGC AAACACAATA AAACTTGTAT
```

```
14201 AATTATAGTA CTAAGGATAC ATTTTCCATC CTTTTTTGAA CCTAACAATT
14251 TAAACATTAA TAGATTTATC TTACTGTCTT ATAACATGAT TTTTTGCATA
14301 TTACAACCTT TAGGCTACTT TTATTATTGC ACATTCATTT TTAATGGTTT
14351 CATAAAAGCC CACTGTACAT ATGTACCCTA ATTTATTTAA GCTGTCTCCT
14401 TTTATGGGAT ATCTAGTTTA TTTCCCTTTT TTTCTTAAAA ACAGTGCTGT
14451 GATATTTCTC TCAATAAAAT TTTAATCATT TGTACATATT TTGTTGTGAT
14501 TTTAAGGGAA CTATAAACCC AGTAGAACAA TTTCCAATGA AATTGAATAA
14551 AATTTCTAGT ATGTGCAGAA CTTGAGATAA CTTGTTTAAT GTGAGTTCTG
14601 ACATTGACTT GCTGTGTAAC CTTGAAAAGC TTTTATATCC AGTTTAGTTT
14651 CCAGATGTAT AATATGGGGT GCTAATACCT GATTCTCAAA CTTATTAGAA
14701 CAGGCAAGTG CCATTATTTG TATGAAAGAG CTTTGAAAAA TCAAACATGC
14751 TAGGCAAACG CAGGGTAATA TAATTAACCA GGCTTCTTAT CTATTAGCAT
14801 AAATGCACAT AAGTAAAATG TAACTAATTA ATTTTTAGTG TTTTCCTAGG
14851 AAGGTGTTCA TTACCCATAA ATGAATCTAT TTTATGGATA GGGAAAATTG
14901 AAATCTTAAG GCTAAGTTTA TCCAAGATCT AAATATATAG CTATGCTAAG
14951 TCTGAAAGCA TTTCTTTTCA TTTATGATTC AATCCATGAA AATGGACGAA
15001 ATATGTGGAT CATAAGAGTT TCTTTGGCTT AAGAAATTAT TGTTTATAGA
15051 AATAAGGGGG AAAGCCCATT TGAGCAGTAA GCAGTCAGGA CTGTTTGTGG
15101 CAAGTGACAG AAACCCAACT AACTGGATAG TTTTAACTTC AGGTATAGCC
15151 AAATTCAAGG GCTTGATTGA TGTCATCAGG ACTGAGACAT GCCCTCTAGA
15201 TTTTTATGCT TAGCTTTTCT CTAAACTGGC TTTACTCTCA GGCATAGATA
15251 TGTCATATAT CAGATCCCAG CACTGGCAGC CTTCACCTGC CCAGCTACAA
15301 GTCCAGTGGA AAGGAAACTT CTCTTTTCTC ATCAGTTCCA CAAAAGTCCT
15351 GGGCCTGATG TCATTGGATA AAACTTAGGA CACATGCTCA TTTCTGAATA
15401 TGACACAGTG GCCAGGATAT TGTAGTCTTT TGCTTGACAT GGGCCTAGTG
15451 AAATCATCAT TTTTAGAGCT TGGGGTAGTG AGAAGAACCA AAAGATTGTG
15501 GATTTAAGCC AGCCCACCAA AACCATACGG ACATGGGGGA GGAATAATTC
15551 CCTCAAAGGG AATCAGGATG CTATTACCAA AAGAATGGAG ATTGAATGCT
15601 TGAGAGGCAA AATAGATATA TATATATATT TTTGTCTATT AAGCATATAT
15651 ATATATACAC TATCTATATA TAGATGTAAA TGTATTTATT GTCTATTTTA
15701 TGTATTTATT GTAAATAAAT ACATTTACTC TCTCTATATA TATATTCTAT
15751 CTATATATAG ATGTCCCCCA TTGCACATCT TTTCAGAAAA GAAAATTCAG
15801 ACAGGCTGGA GCTGAACCAA TGCAGACAAA AAGTCAACAT GCTAAAGTCA
15851 GAAGAGCCAC CAATGAGACA AGCACATACA AGGGATTCTG GTGGGTAAGT
15901 CAAGATCAGA AGTCAGGACA GGCAAAAGGT CTGAAATTCA GGCTTCTGAG
15951 TTAATCAAAG CTGTAGGGGT CTTTGGTAAT CCTTGTCCAG CCACGAGCAA
16001 ACCTGTGTTC ACAGAACAGT TAGAAAGTGC TAGCCATTCA CCCACATAGA
16051 AGCGACTGGG AGGTGGTCTC TCCAGGCCAC TCTGATAATA AGTTGAGGTT
16101 GTCGGCTGTA AAATGTTTGG TGATCCTGAG GCACCAATAC TCTGTCCCAG
16151 TGACCAGGAC ATTTCCTGCT CTACTCAAAC ACTCAAGCTA TTGTGCACAA
16201 ACTCTTTAAC AGTCCCAGTT GGAATCTTGG CTGCAAATCT GATGAGCCCA
16251 CACCACCAGA TGGTAGGTTC TCCTAATTGG TTCCATCCCC TCTAGTTTTT
16301 GGCAGGAACG AAACCTTCCC TATACCTGAA GAGGGGACAG GGAGAGCCAG
16351 GATCAAATGA AGGAGGCTTT AACCTCTGTT AAACAAGCAG AGATCTCAAG
16401 CTGGCTCCTG TCCAAGGCAA ACAGGGCAGT ATGGTTCTTT TACATAGGTC
16451 ATGGATTTAC AGGGGACTGA TATCCTAAGA CTAACACTGA TGAGGCACAA
16501 GACTGTAATG ATTGAAAAGT GGTTTAGCTA CAAAGGTCAA CTGATTTGGG
16551 GGAAGGTGCA CTTGTTTATT CAATAATTGA TATTTGTGGA GCATCGTGGT
16601 AGATGAGATT ATTATTTGGC AATTATTTCT CTCTCCCTCA AACTCCTTGG
16651 GAAAAAAATA TAACTTCCTG CTTCATTAAT GTCACATTTG GTCATTTGAC
16701 ATGCTCTGGC AACTTAGATA TTAGTAGATA TGTTTGAAGC AGAGATTATG
16751 AGAAGAACAT GCCCCAGAGA GCCTGCTCGT CTCATAGGAA AGGTAAATAC
16801 AGTAAGTAGA AGTGTCCCAG TCAACCCACA GCCCACAGAC TAAAGTTTGA
16851 AGCAGAGCTA TCCCAGCTGA CCTGAAAATC TGTGAGCATT GTAGGAAATG
16901 CTCAATGTTA TATACCACTG AAATTGGAAA TGGTTTGTTT TGCAGCAATA
16951 GCTGGCCAAT AGAAGCAACC AGCGTGTGTT CCACACTTTG CTAGGCACTG
17001 AGGGAACATT GGAAATGACA GACATAGTCC TGGTCTCCAT GGAGCACTAT
17051 TGTAGCTAGG AAGATAGACA ATGAATACAT TTACAAATAA AATATATATA
17101 GAGAGATCAT TACTAGGGTC ATAAAGAAAA TAGGATGTAG TGACATCACC
17151 ACTATGGTAG AGAAGAACAC CTTTAAAGTA AGTGGTCAAA GAAGGCATTT
17201 CAAAGGAGGT GACTTCTGAG CTCAGATATA AAAGTTGGAA GAGAGCCAAA
17251 TGAGAGTAAA TTCCCCTGTG GAATGTCGAA ATCCAGCCCC ATGGGCAACT
17301 TGGATTGAGA ATCTTGGTCT AGGCAGAGGA GAATGAGGTG CCCTGGAAAA
17351 ATCTCCTGCA AACTAGGTCA CTCACTTGTC TTAGGGCAGA TACTAGCTTC
17401 TCTCTACCAC ATCACATGTG CAAGTCAAGG GCTGGCAGAT CACTTGCTGC
17451 CAAGACTAGA TGGTCTCAGG CATTGGAAGC CACTGAGCAT AGCAAGGCAG
17501 AGAGGGGGAG GTATGCTAGG GCATTCCTAA CCATGAGGTG ATGGAATTGG
17551 CTATACTTCT TGGCTTGGCT CCAGAATACT CAAGAGTTGT TGCTTATTAG
17601 GATGGCAAGA AGGGGTGTGT GTGTGTGTGT GTGTGTGTGT GTGTGTGTGT
17651 GTGTGTTCAT ACATATATTC ATTCTTTCAC AGAGGAGGAA AATGAACTAG
17701 ATGGCTTCTA GATCCCTTTC CAAGTGTGTG ATTATAAAAA GGATGCTGAG
```

FIGURE 3, page 5 of 122

```
17751 ATTTAAATTA TGTGTGAAGG AAATGTTAAA TTGAAGAACT TCATCTTAGC
17801 TCTGTGCCAA GCTCCATTTG TTAATTGAGG TGGTTAATTA GAAAGGAGTC
17851 TCCCTTGAGC AAGCAGGATA AGCTCCAGCA TCCCTAATCT ATCTGGTAAA
17901 GGCTATAGAG GTGTCACACC TACAAGGGAG AACAAAGAAC ATCTAATGCA
17951 AGCCCTCTGT TTAATCTTCA CTCCAGACAC TGAAAAGCAA GAATGTTGGG
18001 GGACAGGAAG CTCACAGCGC CCGCATGGAA TTTAGACTCC AAGTAGTTTA
18051 TTAGCTTTGG GAAAATTATT TAACTTACAC TGCACTTACT AGCTCTTCTT
18101 CCTTACTCCA AGATCACTCT GAATACTTTA AAATATGGTT GGACATGGTG
18151 GCTCACACCT GTAATCCCAG CACTTTGGGA GGCCAAGGCG GGCAGATCAC
18201 TTGAGGCCAG GAGTTCGAGA TCAGTCGGGC CAACATGGCA AAACCCTGCC
18251 TCTACTAAAA AATACAAAAA ATAGCTGGCA TGGTGGCACA CACCTGGAAT
18301 CTCAGCTACT TGGGAGGCTG AGGCACGAGA ATTACTTGAA TATGGGAGGT
18351 GGAGGTTGCA GTGAGCCAAG ATCAAGCCAC TGCACTCCAG CCTGGGAGAA
18401 AGAGTGAGAC TCCTTCTCAA AAAATAATAA TAATAAATAA ATAAAAGATG
18451 GTTTCTATGT TGATGTAATG AACCAAGTAT TCTAGGGTTA TGGAAGAATT
18501 TCTCATCAGC AAATCCAGCT ACTTATGTCT TTGTTTCTTG CAGCCTAGGG
18551 CTGATGGAAG TCTTCACACC CCTTCCAAGA ACCCCCACAA ACATTCCACC
18601 ACCCCACAT ACCCCTGCAA GAATGAAGCT TTCTGGGGCT ATGTTCTCCT
18651 CAACACCACC ACAGGGGTCC TCTCTCACTC CTTCTGCTCC TTTTTTCTCA
18701 CTAGCGTCTA CCCTTTCCCC AGGATTCCAG CCTATACATT CTGAGTTCAA
18751 CATATCAAAA CCAGAACTTG GCATCCTTCC TGCCAAACTC ATTGCTCTTT
18801 TCTCACTTTA TTTCTGTTCA ATCATTCAGC CTTAAAATGT GGGTGTCTGG
18851 TTTCAACTTC TCCATATAAT CAATATTATG TGTTGATTTC ACCACCACTA
18901 TGACTCGAGT CTATCCCCAT TTTCTTCTTT TCCCACTGGA TTATGGCTTT
18951 TGCCTTCTGA CTGTCATCTT CATGATATAA TCCACTTACA GGTGGCGGAT
19001 CAATTTATTG AAGACTATTT CTGATCATCA AGCTTCTTGT CTCAAAAAAA
19051 TATCAGTGGC TTCCCATCTT ATTTTAAGTT CAAACTCAGA CTAAAATATG
19101 AGTCTCTCCA TAATGGGTCT CTGCCTGCCT TCCTTTTGAG ACTTACCTAA
19151 ACCCTACACT CTATGTTCCA GCCAAACTAG ACTACCTAGT GTTGCCACAA
19201 ACATGCCTCT CAGTCTTTCA CTGCTTTGGT CATACTACTG ATTCCATCTG
19251 AAATAGTCTC TACCACATTG AGCACCCACT CTCTACTAAA CCCTGGAGAT
19301 ACCGCAGAAA ACAAAACCAG CAAACTCCCT GTACCCTTGG GGTTTACGTC
19351 CTGGGAAACA AATACATATA ATGATTTCAA ATACTAGTTA AATGATACAA
19401 ACATAGCCAA ATAGAGTCAT GGGACAGAGA GTGAGCTGTA GTGCTACATT
19451 AGATGGGTGG TCAGGGAGGA CAGGCATCAC CTGAAGAGAT GATATTTTAA
19501 CTGAGCCTTG TTGCAATCCA TAGAACTTTC TGCAGTGTTG GGAGACATTC
19551 TATATCTGTG CTGTCTAATA TGTAGGCACT AGCAACATCT GCCCCTATTA
19601 CACATTAGAA ATGTAGTGAG CATGACTGAG GAACCAAATC TTTCATGTAA
19651 TTTAATTTTT ATTAATTGTA ATTTAAAAAG TCACATGTGG CTAGTGACTG
19701 TCATATTAGA CAGTGCTAAT CTAGATTCTA GAATATTTCA GACAAGAAAA
19751 AAAAAACAGT AAGCATAAAG GCTTTAAATG AGAGTGAGTG TATATTCAAA
19801 GAACAGAAAG AAGGCCAGTG GAGCTAAAGC ATGCTGAGGA AAGAGACAGG
19851 GTATTTTGTA AGTCATGATA AGGAATTGAC ATGGAGTTTA AATGCAATAA
19901 AATCACTAAT GGATTTTAAG CTTGGGAGTG TAGTGATCTG ATTTAATTTT
19951 CAAAAGATTA CTGTGGCTCC TCTGTGGAGG AAGGAGAAGT GATAAATTGA
20001 CATGAAAACA GTATGTGTCA GTCAGTTTTT GCTGCATAAC AAATAACATC
20051 AAAATCTCAG TGGTTTATAA CAAAAGCTTT TTTAAAAAAC AATCACATCT
20101 GCAGGTTGCA GGCTGCAGTC TGTAGGTCAA CCATGATTCT GATTACACTG
20151 TAGGATAGGT TAGGCTAAAC TCCAGGAGGG TTCAGGTCTG CCCGATGTGT
20201 CTTTGTTTGG GTATTGAGGG TCAAGGGGCA GCAGCTACAA AAAGACCTGC
20251 TCTCCTTTTC CAGGAGCACA AGAGGCTAAG CTTTATCATG CAAATATATT
20301 TAAAGCTTCT GCTCATGTCA TGTTCTCTAA TATTCCATTG GTTCAAGCAA
20351 GGTATGCAGC TAAACCTAAT GCTCATGGGG CAGAAAACAC ACTCTGTCTT
20401 CTAAAAGGAA TTACAAAGTC ATATGACAAA AGGCATAGAT GTGTAATTTT
20451 ATAACAATAT CCAATGTAAC ACAGAGGGGA CTGGGGAGGT TCCTACAATA
20501 GTCTGGATGA CAGATGGTGG TGGCTTGGAA AAGGTGTTAG TAGAAGAGAT
20551 GAAAGAGGTA AGATTCATAA AGTATTTTGA AGAAAGTATG CACAGGATTT
20601 AGTGAGAGAA TGAAAGTAAA GTATGGGGTA AAGAAACAG ACCATTTTCC
20651 AAAGTGCTTC TCAGATGCTA CCACAGCCCT GTGAAGCTGC TTCTCCCTCC
20701 CTCAATTGCA GCTGATTTCC TTTTCTCTTA TCTCACTGGC TCTCTTTTTT
20751 GTGCTGCTTT TATTGGCCCA TTTCAACTTT CTACCTTCTG TTCTTGAGAG
20801 GTTTTATCTA TTGTTAAGAC TCTGAGGTTT TGAGGGCAAG AGAATAAAAT
20851 TATTTGTATT TGCAACCCAA CTGCCTAGGG AATAGGCTCA ATAAATATTT
20901 CCAGGGCAAT ACAATGGTTA AGAGCAAGGA CTTTGGAGAT ATCATCCTCA
20951 TTTTGGATCT TGTGTGATCT TTATAATTGA CTTAACCTCT CAAAGCCTTG
21001 GTTTTTATTT ATAAAGTGGC AGTAATCATA CACTCCTTTT ACAGTTGTGC
21051 AGATTGAAGG AGATCAACTT GGAAAGTGCT TAGCATAAGG CCTGGCATAG
21101 AGTAAGTACC CGATAAATGA GAGCTATTAT TGTTTGTTCA ATTTAATTGT
21151 TTGTGATGAC AAGCTTCTTT GGAAATGCCC TCCAGAGTCT TCATCAGAAA
21201 ATTCAATGTT CTTGTTGAAA TGAGGGGCAC AGAGAATAAA AACACTCTGG
21251 ATGGGATTTT GTAATTTAGT AAGGAGATCT CTAGATCTAA AGTCTCTTTG
```

```
21301 ATCTGAAAAT GACAGCAACA ACAAAACCCC AAAATAGAGC CACTTTGCTA
21351 CTTGTTTCCT TTTACCATCT GCCAAGATGG TTCTTTTTAG TTCTCGAGGT
21401 CTTGCTTGGA GTCAGCTGCC TTAAAATAAT AAAATAAAAT TTAAATCTGG
21451 TCCTGCACTT ATTTGGGAGC GAGAAGACAA ACTGCTTTAA CTAAATATAT
21501 AGCTAGTTGC TGCTGGAGTG AAATATAGGG CAATGTTGAC TAAAGTGTTT
21551 GAGGAATGAA CTGCTCTGGG AAAGTGAATT TTAGGATAAA ACTGAGGATT
21601 AATCAGAACC TGACTTTTTT TTTGGTAACA TTTGTAATTG AGACAGTTTC
21651 CGACATGTAC TTTTCAAGCT TTCTTGCCTT AGTGAGATGA CTTTGTTGAT
21701 CCTAGTTTAA AGTTGCCTTG ATCATAAGTA TCCTGTAAAT CCAGCGGGCA
21751 TTGTGAACAG AGATTGTCTG CGATTGCAGA TGAGAACAGA AAGGTTGGGG
21801 GTGAAATCGC TGAAAAGAG TGCATGAAAG AGGTGAAAAG TTAACATGAT
21851 GAGTTTGGAT ATCTGCAGGA GGGTTTCTCC GGAGCCTTGC AAGATACATT
21901 TGGAAAAATA GGCTGGGTTC AGACTAGAGA AGGCTTTGAA GGTCAGGAAT
21951 AAGTATTTGA GAGACAAAAT AAATATGTTTA AGTTGCATTG TTGATATTCC
22001 AAAGGTCTTG TTTATAAGCA AATAAAGGAT GATTTTATTT AGCAAGTACT
22051 AGAATAATCC TCAGCAAACA TAAAGTTACC TGACATCAAA TGATGCAGAA
22101 TATCCACATT TCTACACAAT GAACTCTACA GGGTTCATTT TTAAAGTGTT
22151 TTAGGAGCTC ATTTAGTCAG TGCTTCCCAT TAGAACTGTG ATGTTCTGAG
22201 GATATTAATA GGTTATTTGG GGAGCATTGG GGGTGATGAG GGAAGGTTGC
22251 ATGGTTATAA ATTTAGTCAT GCTGATTAAG CAAAGTATAA GGGGTGCTGT
22301 GTTTTAGGAT TTTGAAGACC CTTTAAAATG CTAATGTGTC TTGTTAATTT
22351 CTAAAAAAGA GGATACAGTA TGTATTTTCC AAACTTAGTC CCTCTGTAGC
22401 CCACAGAACA GGCGGGTCTG ATTGCTTGGT GAGTGACAGA TCAATGACCA
22451 CAACCAAGGA GTATTTTAAA AAGGGATTTT ATTACTTGCA ACAAGTAAGG
22501 ATGGCTGACA CTGAGCATAG TTCCCAAAGC AGTGCCTCCC CAAATAAAGG
22551 TGAACCCAGG GCTTTTATTG ACCTGGTTGG CTGAATCATT GTATGTAGAG
22601 GTGAAGTAAA GGCAGTGCAG GTGCAGGTGC AGTCACAGAT CATGCTTTTA
22651 TACTTGTGGC ATGTATAGGA AATGTTGAAT AAGCTCATCT CTGGATGGGG
22701 ATTTTAGTAC GTTAATAAAG GGAGTTCACC AAAGTTCATC TCCAACTCAG
22751 GCATCTCAAC CAGTTTTTGT TTTTTGGGCT TCTTCCTGGA ATTTTTTTG
22801 AAACAAGAAC TCAAGGTGCA ACAGTTACAA GTGTGTAATT TCTCATTGTG
22851 TGTACCCAAC AATCTGGGGA CCCTGAGTTA TAACTCTTTT TGCTGAATTT
22901 GTGAATAATG TCTTGTGATG TTTAATCCTG TTTTACATAT GGTGAAACTA
22951 AGGCTGAGAG CATACACAGG GATTTATCTG CAGTCAGGTA GCAGCCAGGT
23001 CACGATGCTA ACACAGAACT TTTGACCGTC ACCCAAGGCC TCCTACTCTT
23051 CCAGGCTCCC TGTCAATTTT TGGAGCCAGT CCTCTAAACA GTTTTACCCA
23101 GAACAAGGAA TTGCCGGTGA TTTCAGAAAG AACTGGCAGA CTCGGGGGAG
23151 GCACTTGCCA AATTGGCTCA GGCTGGCCTT GCTGCCATGC TTCTTTTCCT
23201 CGTTCCTGCA AAGCCAGTTC TAGGTAACCT ACCTGCAGAT GTCTACCCTG
23251 AAATAACACC CAGCCTCTGT TACACTGCTG TTACACACAA ACAAACAAAG
23301 CAAATCTGCT GCAAAAAGAG GCAGGTTGAA ATAAATTATT TTTAGTGCAA
23351 CATATAACGT CAATGTCAAA AATACGAAAG AGGCAGGTTG CATAGGGAGG
23401 CTGAGGAGGA GATGCTGAGA TTCAGTGTGG AAGGTGACAA GATAAGAGGA
23451 GGAAAGTTTG CCCTGGCCCT GAGGCAGCAA AATTAATTTT GCCCCAGGCC
23501 TTTAACTGAG GGAACCAAAT CTATTTATTA CAGAAATTAT AAAGAGATTT
23551 GGTGACTGAC CCCACTTTAC CTTGAGTGAT TGGACTTTAC ACGCAGGTAA
23601 TAGGAATAAT AGTGTCATAT TTATAGAGCA TGTTCAGGTG GTTGAGGATA
23651 TGGAAAGCCT TTCCAGTAAG GAATGGTTGG AGGCTCTGAG AAGGAAAAAC
23701 TTAGGCTTGG ATTTCATCAT CAAACTTCTA AACAAACATA TTTGGAAAGG
23751 TACTGCATTT TCTATGGCCC AAGAGGCCAA AACACAGACA AAGTGAGTAC
23801 AACATTTGGT CTGGCAGATT TTGACTCCAC ACGACAGAGC CCATTCTAAG
23851 TGTGTGGACT GGCTAGCAGT GGCGAGGGTT CCCTTTCTCT AGTCTGCAAA
23901 CCTCCCAATC AACATGGCTG TTAGAAACCT GGTCCTTTTG CAGAATTGCT
23951 TTACCACTTC TACCTTGATG ACCCAGTGCC TGTGATACCA CCGTTAGAAA
24001 GTCATCTAAT TGCGTTTAAA CTTGTTCTCT CCAGCATCCG TTGAATAGCA
24051 AAGACAAATC CTTCTGACCA TAGTTCTAAT TCTGTGGGCT GGCACTATGG
24101 ATTTAATTGT GCCCTCCCAA AATCCGTTTG TTAAAGCCCT AACCTCCAGC
24151 ATGATGGTAG TGGGTTTAGC TGTCGTCATG AGGATGTCAT CCTCATAATG
24201 GATTAATACT CTATAAGAGA CACCAGAATA CTTGCTCTTT CTCTTTTTCT
24251 GTGCACATGC ACCAAAGTAA GGTCATGAGA ACACACAGCA AGATGGCGGC
24301 CATTGGCAAG TCAGGAAGAG AACCTCACCA TAGTGGCACC ATGATCTCGC
24351 ACTTCCAGTT TCCAGAACTG TGAAAAAGA AATTTTTGTT GTTTAAGTCA
24401 CCATTCCATA GTATTTGGTT ATGGCATCCT GAGCTGACTA ACACCACTGG
24451 TAATTAAGGT GTTTCTTCCA TGAAAAATGA AATGATGGTC AATAGGAAGC
24501 AAACAGAAGC TTAAGCAGAA GGGCAGAAAG GAGTGCATTT GGGAACCAGA
24551 GGGAGTCCTA TAGAGACTAG ACCTGGGATT TTGACAGTTC TGCTGAGGGC
24601 TGGCCCTGTG CCCAGCCTCC TTCCACTTCT CTTCATCTCA CTAGACCAAG
24651 AAAATATGCA CATCTGTTAT CCACAAATAC TCTGAATTCC CCCGCCAACG
24701 CAGATCCCCG GGAAAACCTA ACACAAGCAG AACAGTGGAG GAGATGCACG
24751 GGGTATTTGG TGTTTCTCAG GAAAAAGGCT TGATTTTTTG ACACCCTCTA
24801 TCTTGGTCTC TTAATTTGTC CTGAGTCAGT GAGCCACAGT GAAGTCCAGA
```

```
24851  GAAAAAAATG  GAAATAGGAG  AATCGGGCTT  AAACCTCAGT  TTTGTCGCTG
24901  ATTAACCTGT  GATCTTGGGC  AACCCACTGA  TCTGTTCTTT  GTTTCAGTTT
24951  CCCTCCATGA  CCCTGAGTAC  TTTAATAGCC  TCTATTCTCC  CATGTATCTC
25001  TGTTGAACAG  ATCATAAAGA  GTAGTGATTA  TGAATCCAGA  CTTTACTGTT
25051  ACTGTCAAAT  ATCACATTAA  TTTCCTCAGC  CACTTTACAC  CTGTGCAACC
25101  TGAGGCAAAA  TTTTGTAATA  TCTCTGTTTC  AGTTTTTATA  GCTGTCAAAT
25151  GGGGTTAATA  ACAATCCCTA  TCACAAGCAG  TCTTTACAGG  CATGGAATGA
25201  AAAATTGCTT  GTGAAATGCT  GAGTGTAAGG  CCTATTATAT  TCAGTAACTA
25251  TTACCTCTAT  TTTGGTTCAA  CACCATTTTG  CAGTCTCCCC  CAAACACCCT
25301  GCTGCAACAC  ACCTCTAAGC  CTTGGCTATG  CTGGCCTAAA  AAACTTCTAG
25351  ACACCCTTGA  TGACCCAAAT  GAAAATCTTC  TGAACCCAAG  GAATGCTTTC
25401  CTGGCTGTGT  AGGTGGCAAG  CATCACACTC  TCAAGGGAGT  AAAACTGTGC
25451  CTTTCTGCAA  CCATTATTGC  CCATAACCCA  TCATGTTGTG  ATGCGTTTTT
25501  TACAAGATTG  TCTTTTGTTG  TCTATGCTTT  TGGGGTTATA  TGCAAGAAAT
25551  CATTATCCAG  ACCAATGTCA  CATGGTTTTT  CCCCTATGTT  TTTCTCCAGT
25601  CGTTTTACAA  TTTCAGGACT  TACATTTAAG  TATTTAATTC  ATTTTGAGTT
25651  GATTCTTGTG  TAAGGGATGA  GAAAACGGTC  CAATTCAATT  CTTCTGCATG
25701  TGAATAGCCA  GCTTTTCCGG  CACCATTTAT  TGAAGAGACT  ATCCTTTTCC
25751  CCTTGTGTGC  TCTTGGCACC  TTTGTAGAAA  ATCAGTTGAT  CATAGACTTG
25801  TAGGTTTATT  TCTCAGCTGT  CTATCCTATT  CCATTGGTCT  ACATATCTGC
25851  TTTTATGCTA  GTACCATGCT  GTTTTGATTA  GTATAGCTTT  GCAATATATT
25901  TTGAAATCAG  ATCATGTGAT  GCCTGCAGCT  TTGTTTTTGC  TTAAAATTGC
25951  TTTGGCTGTT  TGGGATTTTT  TTGTAGTTCC  ATACAAATTT  TGGGATTTTT
26001  TTCTATTTCT  GTGAAGAATG  ATGTTGGAAT  TTTGACAGAG  ATTGCATTTA
26051  ACAAGAAAAT  TAATAACCCT  ATTAAAAATG  GGCAAAAGAC  TTGAATGGAC
26101  ATTCCTCAAA  AGAAAGCATA  CAATAATGGA  CAACAGATAT  ATAAAAAAAT
26151  GTTCCACATC  ATTAATCATC  AGGAAAATGC  AAATTAAAAC  CACAGCATAA
26201  TATCACCTCA  GACCTCTTAG  AATGGTATTA  TCAAAAAGAT  GAAAAAAAGC
26251  AAATGCTGGT  AAGGATGTGA  AAAGAAAAGG  AAACCCTTGT  ATACTGTTGG
26301  AAATCATGTA  AATTATTGCC  CTCAGTTTAC  AAAACAATAT  GAAGGTTTCT
26351  CAAAAAATTA  AAAGCAGAAT  TATCATGATT  CAACCAATTG  AATCATGGTA
26401  AACATCTAAA  GTTCTGGGTA  TATATCTAAA  GAAATTGAAA  TAAATATGTC
26451  AAAGAAATAT  CTGCACTCTC  ATGTTCATTG  CAGCATTATT  TACAATAGTT
26501  AAGATATGGA  AACAACCTAA  ATGCCCATCA  ACAGATGCTA  GGATAAAAAA
26551  ATGTGGTATT  GCTACATAAT  GAAATACTAC  TGAGACTTTA  AAAAAAGAAG
26601  AAAATTCTGT  TATCTGTGAC  AACATGAATA  TAACTAGAGG  ACATCATGCT
26651  AAGTTAAATA  ATCCAACCAC  AGAATGACAA  ATATTGCATG  ATCTCATTCA
26701  TATGTGAAAT  CTAAAAGCAT  CAAACTCGTA  GAAGTAAAGA  GTAGAATGGT
26751  GGTTGCAGAG  GCTGGGGACT  TGGGGCATAT  GTTGGTCAAA  GGGCACAAGG
26801  TTTCAGTTAG  ACAGAAGGAA  TAAGTTCTGG  TGAGATATTG  CACAACAAAG
26851  TGACTGTAGT  TAATAATATA  TTATGTATTT  CAAAATTTCT  AAAAGACTGG
26901  ATTTTAAATG  TTCTCACCAC  AAAGAAATGA  CAAGTATGTG  AGGTTATGAA
26951  TACGTTAATT  AGCCTGATTT  GTTCATGCCA  CAATGTATAT  GTCTATCAAA
27001  AGATCACACT  GTAACACAGA  AATAGATATT  ATTTGTCAAT  TAAAAACAAA
27051  TTTTTTAAAA  AGGCTATTTT  TCTTGCTGAA  TCCCACATGT  CTCTGGGGCT
27101  AGGGTAGATG  TCTTTTTTAA  CCAGATTGTG  TCCAGCTTAG  TCCGGTGTTC
27151  AATAAGCATT  AAGTGTCTGA  AGGGTGGTCA  ATGGACAAAC  AGATGAAGGG
27201  TTGCATAGAT  TAATAGAAGT  CTACCATATC  TAGGCTGGGA  GTGGTGGCTC
27251  ACACCTGTAA  TCCCAGCACT  TTGGGAGGCC  AAGGTGGGCG  GATCATGAGG
27301  TCAGGAGATT  GAGACCATCC  TGGCTAACAC  GGTGAAACCC  TGTCTCTACT
27351  AAAAATACAA  AAAATCAGCC  TGACGTGGTG  GCGGGCGCCT  GTAATCCCAG
27401  CTGCTCAGAA  GGCTAAGGCA  GGAGAATCAC  TTGAACCTGG  GAGGCAGAGA
27451  TTTCAGTGAG  CCAAGATCAC  ACCACTGCAC  TCCAGCCTGG  GCAACCGAGT
27501  GAGACTCTGT  CTCAAAAAAA  TAAAATAAG  AAATCTACCA  TATCTACTTC
27551  TCAGGCATAA  ATATGATAAC  TATTTCCTTT  AATTTCCCAT  TGGATAAATA
27601  ACTGTTTATA  AACATCTAGT  TGCCAGACCC  ATGCTTGGAG  TCTCAGGGCT
27651  AAAAGAAATG  CTCCCCATTT  GCTCTATGTG  CTAGTCACAT  CAATCCCACT
27701  TGATCCCCAC  AGCACCCTTT  GGGGGAAAGA  GAGTAGTTGA  TAATCTGATT
27751  TTACCAATGA  ACAAAGGCTC  AGAAAAGACT  AGTTGATCCT  AAAAACACCA
27801  CACAGCATTC  TAATGTTGTA  AAAATACCTG  GATTTGAGTC  CCCTGTACAC
27851  TGATGCCTTG  TGGTGTGGCA  TTGGCTCAGA  TGCTTCCCTC  CTCTGGGATG
27901  TGGACTGGCC  TCTGAGGTCT  CTTTAACCTC  TGGAATCATG  TGAGCTGGAG
27951  CACCTGTTGG  CTGGGGAGAC  AAAAGGCTGC  TGCGTCCAGA  TCTCCCTTCA
28001  CGAGGAAGAA  ATGTGTCTGC  ACTTTTCATA  TCAAAGCACT  TGGGCAGCAT
28051  GGGGGCGTAT  TGTGATGAGG  CTGATGGATC  CTCCCTGAAC  TGGTGCCTCA
28101  GCGTTCCCAT  GCCAACTGAG  GGAAGGAAAA  GAAAAAAAGG  AAAAACAAAA
28151  ATCAAACACG  AAAACTGAGC  TTGATCTAGA  GCTGAAGAAA  AATATTCTAC
28201  TGATGGCAAC  ATTCATGGCC  GTATTATGAA  GAAAACAAA  TTCATAAAAA
28251  CCTCAGCTTG  GCCTTAATGG  TTGGATCTTA  AGATGAGTGA  CAAATGACGA
28301  AATATTGGGT  ATGAGAGAGA  GGCAGGAGGT  GGGAGGAGAG  CAGGCCCTGC
28351  AATCAGAATC  ACTTATTTGT  AACATCCATT  CACGAATACA  TTGCCCTCAG
```

```
28401 CCACGCAGGA AACCCACACA GGCCTAGAGG ATGCTCTCTG CTTTTTTCGT
28451 GGTCCTGCCA TTCCCACCAG TACCCAGAGG CCCGAACCAG CGAGGAGAAA
28501 ACATTCACTC TTTCTCTGAA TATTCAATTG AACTTGTTTT CAGTTTCCTG
28551 ACAGCATCCA GATCCCCAGA GTGCCTGCAT GGCTTTATTT TTTCATCCAC
28601 CGCCTGCTGA CTGGTCCCTC TCTTAATACC CCTCCTCCCC CAGGGCTTGC
28651 TTCTTCCTGT TTTGTGGGGA GCAGAACATT TGAGCTTCCA GGGGTAGTAA
28701 CCACTAGTGC TGGTAAGCAC AGCTTTGGAA ATCAGGGGAG GGACCCTCAA
28751 AGAACCATGG AAAGTCCCCT GGGCCCTCAG AAAGGGAGGG ATCAAATTAA
28801 GTAAGGGAAA CAGACATGAG ATATGGGCAG ATGGGAAGCT AAGTAGCTGT
28851 GGCAGCTCCT TATAAAGAGA TCACAGCTGG AGATGCGTTC ACTAATCCCA
28901 CAGAATAATC CTCTGTTTCT CTTTCCTGAA CCCCCACATC TAGTTCATCA
28951 GCAAGTCTGT CAGTGCTAGT TACAAAATAT ATTTTGAATC CACACACTTT
29001 TTTCAAAAAA AATCTCTACC ATAACCCCGT ATCCCTCACA CTGTGATCTT
29051 TTTCCCATAT CACTACATTA ACCTCCTAAC CTGTCTTCTT GCCTCCTTCC
29101 AGACAATGTT CCACCTGGAG GCTAAAGTGA CTTTTTAAAC CTATTGAGCT
29151 GAACATTCCA TTCCTCTGCT TAAGTAAATG TAGACTCCCT TCCTTGGCCT
29201 ACAAGGCCCT CCATGAACCT GTCCCTCCCT AACCTTACCT CTTGCCCCTC
29251 TCTCATGTAA CTGGATTTCA GCCTTCCAGG CCTTCCTTCA GTTCCTTAAA
29301 CAGGCCAAGC TGCCAGGGCC TTTGCACTGG CTGTTCCCTT TGCCTGGGAT
29351 GCCGTTAAAT CTCATCATGG CTGGCTCTAG TTCACTATTC AGGTCCCAAT
29401 TCCCACGTTA CTTTCTCAGA GAGTGTTCCC TGAACACTTA ATCTAAAGTA
29451 AATTTCTAAT TGCCCTCTCT TCCAGCACTT CAACATCCTT CAAAGCATTT
29501 TTTTTAAATA GCCCACAGGT GCTACTAAAC TTTGAAGCTT TTTTTTTATA
29551 ATTAGTACCC ATTTTGCCTA CTTACTTGTA TTATCTGATG TCTTTTTTTA
29601 CCTGCTCAGT GTAAGCGCCA CAAGAAAAGG ATCTGCTTCT TGTTCCTTGT
29651 ATCCTGTGTC TAGTCTGGGG TTAGCACAGA CTAAGTGCTT AGTAGACATT
29701 TATCAAGTAA CCACATAAAT GAATGAATTT CTGAAGTGGC TATTTCTTTC
29751 TACCTGGATT TGAGCTCAGC CCTGGGGATA CAGACATGAA AAATACACAG
29801 CCACTACTCT GAAGCTGCTC ATGGCCTAAT GAGGGAAACT GAGAAGTCAG
29851 TAGTTTCAGG ATTAAAAGCC AGTAGTTTCA GGATTAAAAG TATGATAATG
29901 TATATTATTA ATCATGTGTA TACATGTACA ATAATAGTAA TAGTGGCCAA
29951 ACTTGAGCCA TTATGTGCTC AGCACTGTAC AAATATTATG CAAGTATTTT
30001 TTTTCATATA ATTGCCACAA TAAACTTATG AGTTAGTATT ATCACATTTA
30051 AACTACATAA AAATGCATTT GGCAGATGCA GAAATGGAGA TACTGCGAGG
30101 TTCAAATAAC TGGGCCATGG GGACAGTTAG TAAGTGGCTG AGTGAATTCA
30151 GCCTGGCATC GTGCTCCATG TCAGAGCCAG TGCTCTGAAG CACTAGATCA
30201 GTGATTCTCA AAAGATGACC GTCCTGGACT GGTAGAGTCA GCATCACATG
30251 GCAGCCTGTT AGAAATGCCA GTTCAAGGCC AGGCACGGTG GCTTACGCCT
30301 GTAATCCCAG CACTTTGGGA GGCCGAGGTG GGCAGATCAC AAGGTCAGGA
30351 GATCGAGACC ATCCTGGCTA ACACCGTGAA ACCCCGTCTC TACCAAAAAT
30401 ACAAAAAATT AGCCGGGCAT GATGGCACGC ACCTGTAGTC CAGCTCCTCA
30451 GGAGGCTGAG GCAGGAGAAT CGCTGGAATC GGGAGGTGGC AGCTGCAGTG
30501 AGCCAAGATC ACGCCACTGC ACTCCAGCCT GGACGACAGA GCGAGACTCC
30551 ATCTCAAAAA AAAAGGAAAG AAAAGAAATG CCAATTCGAG GGTCTCAGGC
30601 CGGACCTCCT GAATCAGAAA CTTTGGAGTT GGGGCTCAGC ACTCTGTTTT
30651 AACAGGCCCC GCAGATGATT CTGAAGATGC TCACCAAAGT TTGACAACCA
30701 CTACCTATTG AATGACTTAA TTTTATGGGA TACTAGATCA GACTAGATCA
30751 GAGTCTGAAG TTTTTCTGTA ACTCAGTTCT CATCTTAACG CTGTGAGTGT
30801 AGATTGCTCT CAATCCACGG CTGAAGAAGC CAGATTGTGA CTGAATAAAG
30851 CCAGTTACCC TGCCTGACCC TGGCTCCAGG ACCTGCAGCA TGTAAAACAT
30901 CATCCAGGAG TGCAGCCCCT GTGAAGACAG CTGACCTGAA GGGCATGGAG
30951 TCTGTGACCC CATCCACCTT GAGAAGCATG CTTCAACCAG CAAAGGAAAG
31001 ACAGTCCTAG ACAAGGAAAC ATCATCAAGT CTCTCTGTAG GAATACTTCA
31051 TATCAGACCA TATTGCCATG TGTTGAAGAT TATTATATAA TGATAATAAT
31101 TAGTACAATA GTAATACCAT ACATTTTGAT TACATTTTTG ACATTTTCAA
31151 GGCATGTTTA TATTCTAATA ATCTATTTTC CCTCTTGATA ATTTTATTTT
31201 CTCCCTTAAA AATCTCTCCA GTTACACAAA GTAGAGTAGG AGTGAAAGGA
31251 TTGTTAATCT GTTAATCTGC CTGTCCAGGG GAGAGGCAAA GTAAAGAGAT
31301 GTATCTGTGA TTTCATGGCC TGTTAGGTTC GTAGTAACAA TAGCTAATGT
31351 GTGTTAGGGA GCTTAAGTGG GCCAGGCTCT TTGCTAGATA TGTCAGTGCT
31401 TATTAATTTA ATAAAACCTC TAGATCCAAG GCTTCCAGAC TCCCAACTGG
31451 TCTCCTTCAG CAAGCAGCGT TTCTTTTCTT TCACCTCACT CTGAATTCTT
31501 CAGACTCTCT AGTCATTCAT TTATTTTATT CATTCAACTT TTATTTAGCT
31551 TATACATCCT ACAGAGAAGG TGAAGGGCAC AGAGGTGAAT GTGCTGGCCC
31601 ACAAATTGCT AGCTCTCTCA GGGGAATCCA GAACAATGCA GTGCCACCCA
31651 CAGTGGAGCC TTGAAGGACA AAGGCAAATT ATTTACCAAA TCAAAAGTTG
31701 CCAGATTCAA GATTCTCTGC AGTTCTTTGA GGTTTGAGCT TGGTGCATAA
31751 GAAGAAAGGG GGATTTTGTT CTAATGAAAG ACAGGACACA AGGGCCTACC
31801 TACAAAAATT GCTGCAATAA ATGAGGACAT CATTAAAATT GTCTTTGTGG
31851 GGGCCCATGG ATATGGAAGT GAGTAGGGAA GATGTATACA AGCAATGGAA
31901 GGAATAAAAG ACAGAAGACT TCCTAGATCT AGTGCTAGAG GCTCCATAGT
```

```
31951 TCTGTTCCTT ACAAATGCTG TAACTTTGGG CCAGCCTCCC AACCTATTCA
32001 ACCTTCTGCT TCCTTCTCCA TGAAATAAGA ACCTGGATTT CTTACTCACC
32051 TGATTCACAG GGAACCTCTG AAAATCAAAC GTAAGAATTA GTAATAGTAA
32101 TAATAACAAT ATAAATAGCT AACATCTATT GAGCAATTAT ATTTCTTACT
32151 TTCACTGGCT TATTTCATTT AATCATGAAA GCATTTCCAT GAAGCAGATA
32201 ATGTTTTAGG CCCCAGTTTA TAGATTATAA AAACAGAGGT TTAGTAAATT
32251 ACTAAGTTCA CCCACCCTTA ACAAGCAGTG GAACAAGGAT TTGAATTCAG
32301 ATCTGTCTGA TCTTTGAACC TATTACTATT AAATCACTAC CCCAGAATTC
32351 AAAAACAAAT GAGGAAAACT CTGCGAGTCA TGCTGATGAA ATGAGCGGAA
32401 TCAAAGAGG GAACAAAGT GAGGGCCTGG GGTCAGAGGC TGTTAGCTTG
32451 GCATGAAGGA TGGAAAGCAT TTCCAGATAC CATGTCCTGA GTGAGCACAA
32501 TGCTTAGGCT ATGCAGCAGA CCCTGGACAG TGGACCAAGG TTTAAGAGTC
32551 AGTGTGAACT TTCAGGAAGA AGAGTTTATG CAGAGTAACA CATGCCATAA
32601 ACAGAAGAAA GTATCAGGGA CCAGAGAAAC AGAGTAAGAG GCAGAGCTGG
32651 AGTCAGGCAG CTGCAGATTC CAATGGCCTC TGACTTTCTG CTGTAGCTGC
32701 AAAGGTACAT TTTATTTAAC TCCATGCCCA GCCCTGTGGC AGTCTGGGAG
32751 CCCTTTGACA GAACTACAGC TTCCACATCT GGCTCAGTGG GGAAGGAGAA
32801 ATAGATCTTC CCGGGCAAAA AGAAGCAGCT CAGTCTTGCT GCCTTCCCTT
32851 GAGTCTGGAC AGAACCATCC TCGGTGGTGA GCTTCCCAGA GCCTTTTGGG
32901 AGTGGCTCAG GGGACCAATT TGCTTCCTTG AAGAATTTTG AATAGCTTCA
32951 GATGTAGCTC TGGTGGTTGA AGCTAAGGAC AATAATGAAA ATAATATGAT
33001 AGCTGACATT CATTGAACTC TAATCAGGGG CTTGTTTTAA GGCATATTTT
33051 AGGCTCTATG CACTGTTGTG TGTCTTGCTG CTCTCATTAC ACCAAAGATA
33101 TTATAGCACA CCCACATCTC ACATTGAATC TGATTTATGT GTGAGTTGAG
33151 TGGCATTGCT GCACACTAGT TGGTGCAATG ACATGTTTTA TAGATATTTA
33201 AATATTTATT AATTTGATTT TACAGTTTGC TTTTAATATT TCAGAGTCAA
33251 TATATTTATT TTTCTGGTCA GACATACTTT TTAGGCCCAC CCTTCAAAAG
33301 ACTGTAGGAC CCAGACACTG AGTTTTCTCA TGCCACCTGG AGAAAGTGAT
33351 CCTGTAATTA TTGTGTTGGG AGCTGAGTGC TCCCACACAT TGCCTGTGGA
33401 TAAGTGTAAG ACTCTGGAAT TAAACTGCCT TAGGTTTGAA TCCTGAACCC
33451 ACTACTTTCT AGCTGTGTAA TCTTTGGCAA GTGCCATATC CTATTTGTGC
33501 CTCAGTTTTC TCATTTGCAA GATGGTTATT GTAAGGACTG AATCAGAGAA
33551 CACATAAACA GTTTAAAATA CTACCTGTAA CCTGTATCAT GGCATGTAAA
33601 GTTGTTATTA TTGATATTTA AAATGTCCCA GTGAGGTAGC CACTATAGTT
33651 ATTCCCATTT TGAAAATGAA GTCAATTTGA TGAATGGTGG AGAGGGACAT
33701 TGAACTCAGG TGGTCTGACC GTAGAGCTCA TATTCATAAT GAGTAAGAGT
33751 TTGTATCAGT CAAGTTAGGC CAGGTTATAC CACAGTAACA AATGACCCCC
33801 AAACTTCCAT GGGCTAATAT AACATGAGTT TATTTCTTGG TCATGCTGCA
33851 AGTCCAACAC AAAATGGTGG GGGAGTGGGG AGAGGCATTG CTCCTCATGC
33901 TTCCTTAGGG ACCCAAGCTG AAAGAGGGAC CATCCTAACA TGATCACAGT
33951 GTCAAAGGAA CTTATGTAAT AAGCCACACC CTGGCTCTAA AGCCTTATTC
34001 CCAAGGTCAC GGACATCATT TCCACACACA GTTCATTGGA TCAAGCAAGT
34051 TGATGGCCAG GCTTAACTTT AAAGGAGGTA GAAAAGTGAA ATCTTACCAT
34101 GTAACTGCAA AATTGGGAAT AGCCAAATGT TATCTCAGAG GAAGGTTTTG
34151 AGGATCAAAT TAATTAATCT ATGAAATTAT CAAAAATAGG GCCTAGAACA
34201 TAGAAAAATC TTCTTTAATG TTAGGTATGA ATTCTTATTA ATTAATGAAT
34251 TGCCTCTTGT AGCAGCTCTC CTGTATAAAT ATCTTCCACC TGATTCTCTT
34301 GTTCCTGATA TCTCTCTCTC TCTCTCTCTC TCTCTCTCTC TCAATGATCC
34351 ATCTTGCAGA CCTGATCCAT TTTATTATTA GACCTCTCTC TTATCATGTC
34401 ATCTCTCTTG TTCTCCCTTG TCTGATTGGG TAAGTTCAGA GTCCTAAGCA
34451 AGATATCTGA GGGCAATCCG TAATTCACTT CTAACCTACT CTGGAATTTT
34501 TTCTCCCACT TTTCTCTAAG GCTGTGTTCT AACTGGAAGG ACTCATTCAC
34551 TGTTCCCAAA TTAGACTGGC ACATTCCTAC CCCATCCCTT GATATTCTTC
34601 ATTCTTATTG TATAATCTCC CTTCTCAAAT GCCTCTTGCC TTTCTGCAAT
34651 TTTATATCCC TCATTATGCA GTTTACCACT TCCTCCAAGA AGCCTCATTT
34701 TTCACCACAG CCTGAAATGA TTTCATTCAG GGCTGAACTT CCACAGTACT
34751 ACTCATTTGG CTGAACTTTA CTACTCATTT GACCCTGAAC TCAGACTGCT
34801 TTGAACATTT TTTTTTTTAT TTATGCTTAT GTTGTTACTG TTGTGGAAAG
34851 AACACAGAGC ACAGCATCAG ACTCATATTG ATCTAAATTT CAGGTCTGTC
34901 ATTGACTGGC CTTGACACCC TGTGCAGGTC AGCCATGTTC TCGAGCTCCT
34951 TGCCCCTTTC CTGTGACATG AAAGTGATTA TACCTATTTC ATAAGAATGC
35001 TGCGAGGATA GAATTGAAAA CAAGTTATAG TGACCTACAT ATAGGAGATG
35051 ACTGTCCTCA TCATAGCTGT GTCCCTAGTA TCAAGAACAG TACCTGGCAA
35101 ATAATAGTCA GCTCAATGAC TATTTGTTGA CTGAATGAAT TATTAGTAAT
35151 CACCAGCCAC TCTTACTGCA TGCTAGTTTT CTCCAAAAGC TGTAAGTTCC
35201 TTGAAGACAG CTTTGAAAAG TAAAGTTCTT TGGAGTCTTA GGCAACGGTT
35251 CTCAAGCTTA ATTATACAGG AGAAGCAAGG AATGTTATTG AAATGCTAGT
35301 AGTTGGAATC TGGATGTACT GAATCAGAAT TCCTGGCACA GGGCCAGGCG
35351 CAGTGGCTCA CGCCTGTAAT CCCAGCACTT TGGGACGCTG AGGCAGGCAG
35401 ATCACAAGGT CAAGACATAG AGATCAGCCT GACCAACATG GTGAAATCCC
35451 TGTCTCCACT AAAAATACAA AAATTAGCTG GGCGTGGTGG GGCTCACCTG
```

FIGURE 3, page 10 of 122

```
35501 TAGTCCCAGC TACTCAGGAG GCTGAGGCAG GAGAATTGCT TGAACCTTGG
35551 AGGCGGAGGT TGCAGTGAGC CAAGGTCACG CCACTGCACT CCAGCCTGGA
35601 AACAGAGTGA GACTCAGTTT AAAAAAACAA AAAGAATTCT TGGCACAGAG
35651 TCTAAACATC TGTATGATAA CAAACTTCCC AAATGATAGA GTCTGAAGAT
35701 TATGCTTTGA GAAATCTTAT TTTGGAAGAG CTCCTCTTGA CTGGATACAA
35751 ATCTTTTCCT GGTAGGGCTT TGTAAGACAA CTCATCTATA AGGATGAATA
35801 AACTTTCTAT CCTTCTGGAC TAGCTTTCCT GCATAGCTAA CTCATTTAAT
35851 TCCAGGCTAG ATCACTTCTA AAAAATCAAT GCATTAGAAT TGAATTAATT
35901 TGTGTTCACT TAATTGATAT AGTGTGTGCT TTTCTAAATG GCACTAGGTT
35951 TGAAAGTGAA GCTGGTCACA CTTTTTTACA GTAGGCTTCT CTAATAACAC
36001 TTGATTCTGT CTTTGTACCC AGTGTCTTCT GTATAGTATT AGCTCAGGGA
36051 TTTGTACGTT GTTGGCCAAC AAACTTTGTT GATGCATTGA AAAATACAGT
36101 TTCCTAATTG CAACTCCAGT GAACCTGTAA TATAGTAAGA TCCTACAGGT
36151 CTCTGTAGGA AATATTGCTA CTGAAAGTCA AAGATCACTC ATTAAGTCCA
36201 TCTCATAGTT GATTGTAGTC CAGTGGAAAT ATTTGCTATA TTTGGCAGAA
36251 CTGTCTTTGT ATAAATAGTG AACAGATACA TTCCATCTTA GCACTGCCAG
36301 CTTAGGATCT CTTAAGGATT CGACTATTTA CTTAACTGAG GTACAGCCCA
36351 TGGGACACAC ATCACCTATT GAATTCCAGG TCTTAGCAGT TTATTAGAAG
36401 TGTAAACAAT GCTTCCATTC AAAAAAGTCA ACTCATCCAA TTGTTAAGAC
36451 GATTTATCTT TTTTCTTTCA TTTCAGCCTA GTGCAGTGAT TCTCAGCTGG
36501 GAGTGATTTT GCCCCTTTCC CTTCCTGGGG GACATGTGGC AATGTCTGGA
36551 GACACTTTTA AGTGTCACAA CTCAGGACTG GAGAACTACT ATTGACATTT
36601 AGGTAAAAGC AATGGATGTG CTAACCATCC TGTAATGCAC AGAACAAACC
36651 CCTACAACAA ATAATTATCT GGGCTAAAAT GTCAATAATG CTGAGGTTAA
36701 GAAACCTCAT TCTATTTTTT GTACTCATTA ACTATCCCCC TCAAAACATC
36751 TCATGTACCC CATAAATATA TATACCTACT ATGTACCACA AAATTAAAAA
36801 TAAAAAGAG TATAAAATTA AAAAAAAAA CCACCTAGTC TAGTTCTTTT
36851 TTTGGCCAAG TGCTGGGCAC TGGTTCCCTC TGCTATTTCA TTGTGTGGAA
36901 CCTGGATGGG CTACTCAGAG TGTTCCTTGT TCAGAATCAA CTTCAGCTGG
36951 CTTACTCTTA GTGGGAAGGC AAAACTTGGG AGATAAGGGT CATCTCAATT
37001 TCTCCTTTCT TTAAGCACTA GTGGTTAGCC CTGTAGCTGG AATACAAACC
37051 ACAACCCTCT CTCCTGATTC ACTATAAGAA CCTGGCTTGG ACTTCTCAAG
37101 ATAGTTTTCC CTCCTCATTT CCCTGGCTTG GTTGGAACAC ACTCCACTCA
37151 GTAAGTTGGA GAGTCTCTGT GGGTATACAA CTGGCACTTT GATTGCCGCA
37201 ACTTTGTTAT CTGTGATCAT GGTATATAAT AATCAGGATG AAAGTCAAGT
37251 TTCCTATTAG TAATTTAGCA ACAGTCACTC AACACTGTAA AAGAAAACTA
37301 CTCCTGTGGA AATTAAACAG AGTCATTTTC TTGTGGTGAA AAGGTCCTGG
37351 GTTTGCCTCA GTGGGTCTAG ATTTCAGCCT TGGCTACTAA ACTTGCTCAT
37401 GGGCCTCTGT TTCTTTATCT GTATGATGGG AATAATAATT TCTGCCCTGA
37451 TTACATTAAT GATGGAGAGG ATCTATAAGA TGGCTCCTAA GTTCTGTAAA
37501 ATGTACCGCA GTTGCTCCCC AAAAGTGAAA CTTGGGATTG GGAAAACTTC
37551 TACACAATCC CAGTCTATGA ATTAACACTT AGGAATCACT GCATTATTAT
37601 TTGAAGAAGT ATATTTATAA CTGCAGCATA TCAGCAAAAT GAGGCCAATA
37651 TAGTAAAGCA AAATGTATAT TTTAAAGGAC TCATATTCTA AGCTTATACT
37701 CTTTTTTTGT TCAAATACCT TTTCTATTAT GCAATGTTAT GGTGATAGAT
37751 TGCAGAATGT TTGGTTGTGT TTTAAAACAA CTTACATGAA AATATCAAAC
37801 ATTAACAACC TGTATCAGTC CCAGAAATGT CTTTAAATAT TTTTCTGATC
37851 TTTGAAACTG AATCCAAAGG AACTCTGCAA AGTCTCCTCA GCAGGAATGT
37901 TATCATGGAT GATACATTGT GAATAAAGTT GTGTGAATGT AAACTGGATG
37951 CATTTGGTAT GTTAAAAATA CTGTTCACAT GCTTTATTAA TTCATGCACA
38001 ATCATCTGCA GGAGGCAGAT CCTATTTGCC CGGGATCACA CTGAAACACA
38051 AAGAGGGTGA ATATGTGCAC AGGGCAGCAA AGCAAAAAGA TCAGCAGCTT
38101 TGGACTCAGG CAAAGCTGAT GTCCCTGCTG AGCTCAGCCA CTTATCAGCT
38151 TCATGACTCT ATGCTAAATT TTAAGAGCCT CAGTTTCTTC ATCTGCAAAA
38201 ATGGAAATAG TAATACTACC CCACAGGGTT GTTTGTGTGA CTAAGTGAGC
38251 CAATATAGGG AAGAGGCTAG ATAGAGAGAC TAGCACTTGG TGGGTGCTCA
38301 GGGTTGTTTG TTTCATTCAT TTAAATTATT TCCAGTATCC CCTAGTGTGT
38351 AAATAGTGAA TCTGTGACAT GGAGGCTCTT CCAAATTTAA TCCAGTGCCA
38401 TATGCCTTCG TGATGCTGAT CATAATCTTG AGAACACAAT CCTGAACTCC
38451 GCAATCTTGA ATACTGAAAT CGCAAAAATT CAAAATCCCT AAAGTCTAAA
38501 ATTTCCAATA GCTAAATTCC TGAAAAACAC AATTTTGAAA GATTAAAATT
38551 GCAAATCTTG AAATCTTGCA AATCAAATCC TGGGGAAGGG ATTAGTGTAT
38601 TTTTGGTTGT ACACAGGATA GGTGCATCGT GTTAGTTACA TCATATTAGG
38651 CAGAACTCTT ATCCTGTTAT TGTCTTCATT TGGAAATTAA TTATGGTTTA
38701 AGGAGATGCA TATTGGAGCT GACAAGGGGC AGACATGTGG GCTTAATTTT
38751 AGGTGTACAC TTGACTGGAT TAAGGAATAT CTAAAACCTG GTAAAACATT
38801 ACTTTTGGTG TGTCTGTGAG TGTGTTTCCA GAGGAGTGTG TGACCTAAGT
38851 GGATTAGGCG GGGAAGATCT GCCCTCAGTG GTGGCAGGCA CCCTTCAATC
38901 AGCAGAGGGC ACAGGAAGAA CAAATACAGA AGTCAAATTG GTCTCTCTGG
38951 CAGCTGGCTG GCTTTTCTTC TACTGCACTG GACATCAGAA ATATTCCAAA
39001 AAGTGTAGTT TCACAATGTT CACTTTCTCC ATAAGCATCA TGTGTGTACA
```

FIGURE 3, page 11 of 122

```
39051 TGAAAACATG GAAACTTCCT TAATAAATGT AGAGATGTCT TTTTGTATAT
39101 CTTCGTTGGT GAAATGGAAC ATTTCTTGAG ATCTCAGTTC TGTGAGCAAT
39151 TGCAAGTGTG GTGATGACCC ATTGCAGTTC TTGATCAATT TCGTCAAAAG
39201 ATTTAGGTTG TCCATCATGT ATTTCAGATG ATTGCAGTAG TAAAGCTTAG
39251 TGCACACAAT TACCAACCAT AGTTATATAC ATTTGTAAAT TTTACTTTTT
39301 GACTTATTAC TTTATGAGTA CAGTTCATTT GCACATCTTT GTTGTAACCA
39351 TGAAACTGCC ATTAGTACAC CTGAGTGTTT ATGCTTGCGA AAATGTGTAT
39401 GTTATTATTG AATATTTTAT TGTATAGAGT GGACTATGTG TGTTCTTTGC
39451 ATTTTTATTT TTCTCAAAAC ATATAGACAT TATTTTATGT TTCTCAAATA
39501 AAAGAAACAT TGCCCTTTTA AAATGTGAAT AAATGTCTTT TAAATTTTCT
39551 TTTTATTATT TTTTCCAGAA TATGTTTTTG GGTTTTTGAT CTTTTGAGAT
39601 TTCAACATTT GGGATTATGG TGTTTGGGAT TGTGTCTTTC AGGATTATAG
39651 CCAAACCCAT TTCTTCTCTG CCTCTGAACA TCTGCAAACC CACTATTCTA
39701 GTCCTCACTT TTAAGGGTAC AGGCTCAGAG GACTAAACTG AGGTTCTCAA
39751 GCTTTTATGT GCATCAGACT CACCTGGAAA ACTTGTTAAA ACACAGCTTG
39801 CAAGGCCAAC CCCAGAATTT CTGATTTGGG AGGTCTGGTG TGAGGACAAG
39851 AATTTACATT TCTACCAAGT TCCAGGTGAT GCTGATGCTG CTGGTCCAGG
39901 GACCACCTTT TGAGAATCAC TGAGCTAAAT GTTTCTTTCT CTTTTCAGCA
39951 ACATTTCACT CCTGTGGTTC CTGACTGTTG TTGGCAGTTT TCCCACAATT
40001 TTCCAAAACT GGTCTTCATC CAGTGTCTCC TCTCATAGTA GACATCACAT
40051 TCATCCAGAA AATAAGGCAT TCTCCTATAT GCCTTCTTCT CTCTTCCTCC
40101 ACGTTCCTTC TGTCTTCAGG CATTGTCTCA CTGGTCCCTG GCCCAGTCTG
40151 TCAATCAGCT GACATCACTG CCCCCACTTG CTTTGAATCA TGCCTCCTCC
40201 CTTAATGTCT ATGTGTCCTT GCATAGGTTG GTTACCAGAG TAGATATACA
40251 AAGAATGAAT GAGTCTCCCC ATCTTTCCGA CCTCAAGAAC TTGATTAGTG
40301 GTATCCTGAC TGGAACAATG GAATATGGCC TTTTGTCTGC AAACAGAAAC
40351 AATTATAGCA GGTTTTCTCA CTAGGGTCAT GTTTGCCTAT TTTATGTTAA
40401 TAAGAGCTGT TGTATTGACT TAGCTGTTCTT TATTCTAGTC ACTTCTGCTT
40451 CACAATAAGA GGCTATCTGT GCTTGCGTTC CAGGGGGTGA GTTACTGTCT
40501 TATATTGTCT GACAGGGCTG TCCCTTGAGG AATATCTTTC CCCAATGCCA
40551 GTTCTTGTAG AGGGGCCAGG AGGTCAGAAC TTAAGCTAAC AAATGATTAT
40601 CTTTCTCAGC AGAATTACCA GAGGACCTCA GACTCCTGGG TTCCTCCTTA
40651 AGGGACTCAG GTTCAGATCT TTGGCCCAGA ACACACTGTA ACCTCTGAGT
40701 TCAGGCTTTA GATGAGGCAC CTGTCAATTC CTATGGGACC TCAACCCAGT
40751 CTCAAATACT TGGTCAAAAG GTGAGTTGAA ACTTAAAACA GTACCAGCCC
40801 CTGGACAGTA TAAGTTGGTC TCATCACATC GAAGTATTCA TGATGAGCAT
40851 CATAAAATCT TCTGAGAGTT GGTTTTGATG AACAGATAAG GAAGAATACC
40901 AACACCCTAA AAGTTGAGGG CAATTCAAGT CCAGATGAGA AGAAACGTGC
40951 AGGATTGCAG ACTTGGAATC CCAAAGAGGC ACTTAGTAAT GGTTATAAAC
41001 TCTGAGGGTT ATTCGTAACT GATGCCTGGC CTTGGGGTAA ATGGATATCC
41051 TGAGGCTTTG GGCAGAACAG TTGCAAACTC CCCAACCTTC TGCTTTTCTT
41101 GGAGGTGATG TTTGTATGAA AAGAGCAGTT TTCTGGAATT CACACAATAA
41151 AATGAGCCCT CTCATTTCAG GCCCTCTGCT GGGTAATCTT GGGCAATATG
41201 CTTCCCCTCT CTGAGCCTTA TTACCCTGTT CCCTCATTTT CGAAGCAGAT
41251 TCTAACCTCC GATCTGCTTC TGTGGTGGCC TCACTGGGAT ATTCTGAAGC
41301 TCAAGTGCTG CTGCTGCTAA TAATAATAAT ACCAATTACT ATAGCAACAG
41351 CAACAACTCT AACTGTGAGC ACTTGTGCTG TGCCCAGCTC TGCGGATGGT
41401 CTCATGTGTT CCATCAGCCC GTTCTTACAG AAGTTCTGGT AGGTAGTTAC
41451 TATCATTATA CCCATCCCAT AGGCAAAAAA ACTCAGCCAC AGAAAGGTTA
41501 AATAGCTTGT CTCAGGTCAC AATAGCTAATA GTGGTAGAGT CTGTACTGGA
41551 ACCCAGCACT GTCCTGCATT TAACTGCTAT GGTACACTGC TCTGTAGATG
41601 TTAAAATTAC TTTTGGTGAA CTTTAAGTAA CTATCAATGG AAGATGATTT
41651 CTTTGCCATG CGACAGTTTG CTCTCCAAGC TTTAAGCGGA TCACCAAGGA
41701 GTCTAACTCC TCTGGCCCTG ACTGCCTCCA TCTTGGTTTC TTGCCCTGCA
41751 TGGGTTCATC TTTTCTTTGT TTCCCCTCTC TGGCATTATG AAAATGAGAA
41801 GCAGCTGTGA GCCCTGCAGA TTGCAAATGG GATTGTGAGT GTTGCTATCT
41851 CTCTAACAAC TAATTCATTA CCCAGTGGCA GATAGTTTCC GCTGTGCTGT
41901 TACAATCTAT TTGACTTCCA GGTGCCACAT GGAATAAAAA ACAATTTGTT
41951 CAACAGTTGG GCCTGGGTGT TTGCATTCAG ACAGGCATGC TTTACCTCCC
42001 TATGTCCTTG AGGGCTGCCC TCTCTGGTAA GGAGCCTTCT TTCTGGGCAG
42051 GAAAAGCTCA CTGCACAGGT GATAGACACT GAAGGATATG TCTGGACTTG
42101 GAAGTAACTT GATCTAACCA GCCATACCTT TCAGAAAATA TTCCAAAAAT
42151 AGTTACTGAA CACCTATGAT GTGCCAGTTA CTGTGCCAGG AGCTGGCTAT
42201 GCAGTGACAG TAAGATGACA GCAAGCTCTG CTCTTAAAAT AAGCACATCT
42251 GCAGATAACT AATAGCAGTA ACTTCAGATA ATAATAAAGG TCAGGGGGAA
42301 AATAAGACTG GGTGATGTGA CAGAGAGCTG TTGGTCTGGA CAGGGACAGA
42351 GAGGGATGGT TGAAGAAGAG ATACATGAGC TAAGATGAGA ATGGTAAGTG
42401 AGAGTTGGCT GTGGGATAAT AGTGGGGAAA AATATTCTAG GCAGAGGGAA
42451 CTTCAAGTAC AAAAGTTTTT AGGTGGGTAC AAGTTGAGAT GGTTCAAGTA
42501 ATAGAAAGGA AGCCCACATG GGGGTTGGGA GGTGGTGAGC CCTAGAGGTA
42551 GAGTGCTAGG AGAGGTGGTT GTAGGGTCAG TCAGGGACAA ATGATGCAGG
```

FIGURE 3, page 12 of 122

```
42601 GCCTTCTAGA CCATGGGCCT TCCTGGGGAT CTTCTCTTTC AGCCCTCTAC
42651 GGGCCCAGCC AACCAAGGCA GGAACTGCCT TCTGTGTATT CATCATATCT
42701 CTGAAGTCCA ACCCCAAACC TCTCCAAGGC CAAGTCTGTG TCTTTTTCTT
42751 TCTAAATATC CTCACCCAAA TCTTACACAG TTCTTGACAC ATAGCAGATT
42801 CTCAGGATAG CCTGATGACT TCAAGTATA AGTTAAGGAA GATATTGCAG
42851 ACCACAGATA TATTTTATTT ATAACCAAGG AAGAGCTTAT ATTTAGCAAA
42901 AGTCTGCACT TCCTCAGTAG GTACTAAGCT CCCTGTTACT AGAGGTACAT
42951 AAGCAGAAGA TGGAAGATCA GTTGGTGGGA ATGTATTGAA TAGAGGTAGT
43001 AGTCATGGTG TTTTGCAATA GAGATAGCAG TAGTGGTCAC AATGATAAAA
43051 ATAGTAATAT TCCTATGTAT TAAACAGTCA ATATATGCCA GACCCTAGAT
43101 GTATATTATC TCATTTAAGC TTCCTAAAAC AACCTCATAA GGAAATACCA
43151 TTATTATTTC CACTTCCAGT CACAGAGACT GAAACCTCTC ACATTTAAGG
43201 ACTGTGCACC TGGGGTCAGG TAGTGAGTAA GTGGTAGGGT CCACTTGAAA
43251 ACCCATACTT CCAGTCCATA CTTGAAAACC CTCTCTAGGG AAACTTAATG
43301 ATTGGAGTCC ATATTTTGAC TTCATGTATC TTGGCTTTTT ATTTCTATCC
43351 AGAGCTTTAT TGCAGGGTGT AGGGGGTGTC ACTCTTTTAC AGCCTTTACA
43401 GCCCTTTTAC ATATATTAGG TAATAATATA GAATTGAATT CTAAAATAGC
43451 TGAAAGTATG TTTTTTCCTC CAGCAAAATC ATTCCCCAAA GATCATCCCC
43501 AAACTGATGA GTATCTTGTT CCTGTGAGCA TTACTGTACT GATCTTTCTC
43551 CCGTCATGTA GTACTTTGTT ATTTGAGTCA TTTCAGCTCT TCAGGGTACT
43601 CAAGAGTAGG TGCTGTTGCC TTACACTGTT TAAGCATTCT CATAGACCTC
43651 TGAATTTCTT CAGACCTCAC ACTCACTCCT TGTTGTGATT TAATATCTGT
43701 CTTCCCAACA GGGACTCAAG CTATATCCCC AGTACCTAGC AAATGGCAAG
43751 TGGCAGACAC CCAATAGACA GGCTGAATGA ATGAATGCTA AGTTCTGTCT
43801 ATCATCTTCA TACCATGGCT GCTCCCATTT AGTTGGAACG TGTGCTCTTC
43851 AGTTTCCACA AACCCCACAG CAGTGTCTTG GACTCCTCAA CATTGAGGAT
43901 GTCATGTATG TGTCATTTAT TATTATCCTT GCTTTTGTGA CACCCACCAG
43951 GCTCACTGGA TCACATTGTC ACCCTAGCCC CTGTGGGCAT CTGGATTTGG
44001 GAACCTTAAC CTGAGGATCT TGGTAAAACC TCCTGGTGTT TCCGGTTTGG
44051 GAAGTAGGCT GTAGAGTCAA TACCTGCGGT CAAACATCAG CCCTACATCC
44101 TCACTAATTG TGTGACCTTG AGCAAGCCCC TTTACTTCAT CTAGCTAATA
44151 AAAAATAAAT AAATAAATAA AACAGTCACC TCTGCATAGG TGTATGGCAA
44201 GGACTGAGTC AAGAAATTTT TAAGAACACT TAGCCCAGGA CCTAGAAGAT
44251 TCTAGTAAGG GTTTAGTAAA TGTTAATTAT GGTTGTTAGT AACATCATCA
44301 AATTTTTAAA ATATTATCAC ACTGACTTTT TGTGAATCTA GACTTGCTAG
44351 CTCTGGTGTG CATCCAATGA TACAAACCCC CATATTCAAC ATTCCTCTTT
44401 GAAAGGTTTC ACAGAATGTT GTCTGAGCTG ACCTTAAAGA TACCTTGCAG
44451 CTCCAAAGTT CTGTGACTTT CACCAGGAGT CTCAAGGCAA ATGCACAGAA
44501 GGGTCAGGCA AGTATCGTGA ATGGAGGCTG GACCAGGGAG CCCATGCATT
44551 CTTCCAAAGG CATTTCAATT CAGTCTTGTT AAAGCACTGA GTTGCACAAA
44601 AGAAACGTCA CTGTTGGCCA GCCTCGGTTC TTCGGCTAGC TCCTTCAACC
44651 CAAGTGTATC ATCTAGGATG GAGGAGGCTT CTGAGGGACT GAGGGAGGAC
44701 AAATCTTGGA AAGAGAGGTA CAAGGAAGAG ATGGGATTTG GATAAGGCAA
44751 GGAAGAGCCA GGAGGCTTTG GATGAACTGA CCTCTAGATA CATTCATTTT
44801 TATGCCAAAA GTCCATTTCC CACTCTTTAA ACCCCTTCAC CTCTTCTCAA
44851 GAAACTTGTG TCTCAGCTTC AGAGAGCCAT GGCCTCATTT AAAATGTTGT
44901 GAAAGAAGGT GATGGAAGCA TCAGGTTCCT AGGCTGGTGA ATTTTTATTT
44951 TTATTTCTCC ATTGACACAG TTTAACCTTT GCTTTTGGCA GCTAGCATAT
45001 TGCTCAAATA AAGTGAAGAG AAGGGTGTGG GGGAGAAGGC AAGAGATATT
45051 TGGCTAGAAG GTTATGAGAA TCACAATAGC TGTCATATGA GTGCCGAGCA
45101 TTCTTCTAAG CACATCCCAT GCATAATCTC ATTTAATGCT CACAATAGTC
45151 CTCTGAAGTC TAATGTCTAT TTAGAAAAGG GAAGCTTATC TGAGGTTTAG
45201 CATAGAATAA CTCACCCATG GTCACCTATG TGAAAAAAGT GCAGAGCTAA
45251 GAATGGAATT GAAATCTGTC AAACTCCAGA GTGTAGAGAC TGACCAAGTA
45301 GACCCCCCAC TTCCAGGCCA ATGCATTTCG GCACTTGATT TGTGGCAAGG
45351 AGTCCTCTCA GGGTTTTGGG GCTATGCTGG TGCTTGCTAT GCTGCCTCGG
45401 AAATGTCACC TAACCTAGAA ATAGTGTTTA TTCTGTTACA AAGCAAGTTG
45451 GAAGAAAAGA AAACACTCCT TTTTTCTTTT TTCTGTGCCT CCTCTCCTTA
45501 CTTTCCCCTG AAACTTAAGT TCCAAGGAGT GCAATTAGCA GGTCAGCTTG
45551 TCTTGCTGAA CAGTCAGGTT ACTTTCCCTC AGTATTTGAT GCCAAGTGAA
45601 TGTTGAGCTG AAAGGCTGGC TGATAAATGC CCCTCTGGGG AGAAGGAACT
45651 GTGAAATAGC CTGGATCTAT TGGCAGATAC TAGGGCCAAA AAGTCCTTAG
45701 AAACTCAACC TGAAAAAAAT GTCTAGGGAA AGCAAACGG CCAACTAAGG
45751 TAGTAAACAC TTCAGAAAAC CTTGATAATA GCAATTGGA AAATCTTGCA
45801 TGTACAGTTT CATTTCATAA ACCCCTCCAG TCATGGGATG GATACAGATG
45851 TCTTGCCTGA AAATGTAACT GGTAAATTTA CAGATAATAA TGTATTGGTA
45901 GTTGCTCACA GAAAGACAGT ATCACGTTGT GGAGTAAGTG CTTGACTGAG
45951 ACTAAAAGGT CTTGGTATGA GCCTCAGGGT CATCATTACC AGCTGTGTGA
46001 CCCTGAAGAA GTCAGGCATT TTCTTGGCCA TCTATGAAGT TGGATTTTAA
46051 CTCCCCAACC CTAATCCACC AGCCATTCTT AATCAAGGAG TCAGATAAAT
46101 GTCTGGCCCC TGTGGGATTC ATTTCACTGT CTTCAGAGAA AAGGGCATAT
```

```
46151 TTGAAAAAGT GTATTCTACA CGGTAACCTT CTAGAGAGGC ACAGGCCTTT
46201 TTTTGTTTTG TTTTGTTTTG TTTTGTTTTG TTTTATTTTT GAGGTGGAGT
46251 CTCTGTTGCC CCAGGCTGGA GTGCAGTGGC ACAATCTTGG TTCATTATAA
46301 CTTTTACCTC CTGGGTTCAA GCAATTCTCC TGCCACAGCC TCCTGAGTAG
46351 CTCGGATTAC AGGCATGCAT CACCATGCCT GGCAAAGTTC TGTATCTTTA
46401 GTAGAGACAG GGCTTCCCCA TGTTGGCCAG GCTGGTCTTG AACTCCTGAC
46451 CTCAAGCGAT CTGCCCGTCT CGGCCTCCCA AAATGCTGGG ATTGCAGGCA
46501 TGAGCCACCG CACCCAGCCC AACACAGGCC ATTTTTAATG GGTTGTTAGG
46551 ATAAGGTGGG TAAATAGATG TGAACGTGCC ATGTAAATTT AGAATGTCAA
46601 ACACGTACAG ACTAATGCTA TTTACCCACC ATCCACCACC ATTGTTTATC
46651 CAGTTGTTTA TTCAATTGCA AATGGCTTCT TAGCCTGTTG GAGAAATGAT
46701 CTGAGGTGGT CAGAGGTATG GCCCATATCT GTCAAATAAA GCAACCTCCT
46751 GGCACATATG ATAGGCCAAA ACCCTATCAC TTGGGATTTG TGAACAACAT
46801 TCTCCAGTCA GCTGAACAAG CAGGTGCTAG AAAAGAGTGT AAATAATTCA
46851 ACTTGTTTCA GGACATGTGT TTAGGTGAGT AACGTGAATG TGAACAGTTT
46901 TTATCTTTTA TTTCTTGGTC TCAAGTTGGC ACTATTAGGC ATCCATTCCT
46951 AACATAAAAT AGTGTCTATG AATGGCAGCT GGTCATTAGA TGTACATATC
47001 CAAATCCAAG ATCAGTACAA TTTTCACCTC CACCTTGTCT TACCTCTTGC
47051 ACTCCCTAAC TCAGTGGCAG TGCCACAATC CACCTAATCA CCCAGAAAGA
47101 GACCAAGAGA CTTTTGATTC TTTTTCCCTT ATCCATGTCT TTGATCTGCC
47151 ACCAAGTTCT GGAGCTGTTA CCTCTACTGT CTCCCTCTAA TCTGTCACGC
47201 TGTCAATGGT GGCAGGAAAT ACCGACAGCA GCTCCTAACT GGCTTCTGCC
47251 ACCACTGCTT ACCCACTGCC AAATCCATCC CAATTCTTGC TGTCAGAATC
47301 GTCCTTTTAA AACAAATCAT CTACTGTGGC ACTCCTTGTT CCACACCTGG
47351 GGAAATCCAG CCTCCGTAGT GTGATATTGA AGGCTCAGCA GACTCTGACC
47401 CTGTCCCATC TCAATTGTCC TTCCACACCC CTCCCCTAAA TTATGCCACA
47451 AATTCTTGTC TGTGTTCTAA ACAATAGCCA GATTTCCCTC ATTTCCCTCC
47501 TGTTTCTGCC CTCTGACCAA ACTCAATTTG CCAGCAATGC TCTCTGGTTT
47551 TTTTCTTTCT TCATCCCTGT CTCCTCTCAA GACTTTTAAT CGTCCCTCAG
47601 GGCCAAGTTT AGATCTAACC CCTACCAATA AGCTTTCCTC AATCTCCCAC
47651 CCCTACCTCC ACAAGAATTA GCCTTCCCCC ATTATATCCC TTATCATTCT
47701 GCCGTACATT AGCAAGATTT GTATGCATGA CTGTTAGACT GACAGCTCCC
47751 TTTGGGGGAA AGGGCCTTCT TGTGCTCATC TGTCCATCTC CTTTCTCTCT
47801 TCTTCCTCTT GCCTCCTCCC TCCTAACCTC CTCCAGCCCA GCATCTAAGT
47851 GCAGTACATT TCACATAAGA GACACCCCAG CAAAGTGTGT TGAATAGAAT
47901 CCATTAATTT GCATTCCATT TCTTTGGAAA TAGCTTTTGG GATCCATTGG
47951 GCAGATAGTG AAAATTTCAA CTAACATGAT GGTGGAGAAA AACCTTAACT
48001 TTTGTGCTCA TGTTAAATTT AGAAACATTT TGTTTCATTC TATCACCTCT
48051 GCTAACCTCT TAACTAACTT GAGGTTATGG AGAAAGGGCA GAAGACTTAT
48101 TTTTCTACTT CTTTAATATT TCCGGTCAAT TCTCTCTTCT CCATCAGTAT
48151 TGCCAGTGCC TTCGTTGAGA CAGGTCATCT TTGTGGTTAA AGTTTGAAGT
48201 CCCTGAGATA AGACTATCTG GGTTTTAATA CTAGTTATGC TAACAGACAG
48251 ACCTTGGGTG AGTTAGTTAC TCTTTCTGGG CCTCAGTTTC CTCAACCATA
48301 AAATGAAAAT ATTAATGCTA CCCATTTTGT AGAGAGAGAT TCCACAGGCC
48351 TAGTTGGTGG CCAGGGAACC CTGGGATAAT AAAAGCAATC GGACATCTTG
48401 GGAACCAGGT AATCTCCTAA CATTCCAAAG ATACCTGCTG TCCCCTCTCA
48451 ACGCCATACA GTGTGTGCCA GTAGATTATA AACTGCATAA GGAAAGAGAT
48501 GATGTCTGCT CTCCTCCATA TCCCTGGCTC CTGACACATA AGAGGATCAT
48551 AAACGCACTT TGCAAAGCAA ATGCCAGCTC TGGAATTCTG CAGCAGCCTG
48601 GAGACCAGAC CCTGCACATC AAGGCCCAGT GGAAAACTAA TGATTTCTCC
48651 CCCGCAGACC TGCCTAGCGA AGGGCCCCGT GGAGCTTGGC TGGTGAGAGC
48701 ATTCTTCATT CTCCGCATGT CCCTGGCTCT CCCTCTCTCT CCCCACCTCC
48751 GCAGCCTCCC AGTCAAGCTA TTGTGCATCT CCTGCTCTCT GTGTCTCGCT
48801 GCCTGGGTCC CTTTCTGCGC TGCTGCCTAA GCATTGTCTG TGATGTCTTT
48851 AGTGTGAAAG GTGATTCACA GAAATAAATT GCATTGTGTT TTAGGTCCAT
48901 AGCAATCTAC CTCTGTAATC ATGTCTGTAA GGGACTTCAT AATAGTGTGA
48951 GGGCCTTGGT GTCAGAACCA GGGTCTCCAG TGGCTTCAAG ATAGATAAGT
49001 GCTGCAACCA AATGCACATT CAGCCAGTGA AGTTGCAAGT TAGAGGTGAA
49051 GATGGAGGTG CTGCTGCTAT GAAGCAACCA TACTCTCAGC CCTTTTATCT
49101 GCAGGTTGAT AAAAATCAAT CAAAACATGA GATGTGGTTT TTTGTTTGTT
49151 TTTAATAACC ACTGAAAAC TAAGACTTGT TTAATAGAGT CTCAGCCAAC
49201 AGCTTGTGCT CTTACCAGCC CTGTGATTAG ACGAAAGGGA AAGTTCAAAG
49251 TGTCACCTAG AAGGGGGAGG CACCAAAGAA GAAGAGGCAG GGAGGTGATA
49301 CAGTGAAAGG CAAGGAGGAG CTGGGCTGGA ATCTGAGAAA CCTGAGACTG
49351 ATTTGTTCTA ATCATCATCC TATGTGATGG TGGAAGATAA GAACCACAGA
49401 TTCTGGAAGG AAATTGATGG CATAGACTCA ACAACAGTGG GATGAATATT
49451 TATACACAAT AAAAGGGGGG CAAGCTGGTT CTCCCAAAAT ATTTAGAAAT
49501 GATGGGAAGT AGGGGGAATT GTGCTCCCTT GATCACATTA TTCAGAAGTG
49551 ACTGCATTCT TATGGCATTT TTAACAGTTT ATTGAGATAT AATTTATATG
49601 CCATAGAGTT TACTTATTTA AAGTGTATAT CTCATGACAT TTTAAGGTGA
49651 TATATTGTTA AGTCTATGAC AAAAAGATTT AAAGGAAGCA ATGTGAAACA
```

```
49701 AAGACCACAA GATGAGTAGA GAGGCTGTCA AAGGTGGAGG GGTGTTTTTT
49751 TAATGTGTCT GCTTCCCCAG CAACTGGTAG ATCTGCCCTC ATCCCACCTC
49801 CCACCACCCA AGGTCTGGCT ATGCCTGCAG GTTCACTACA TGAAGTAAGA
49851 ATAGGTGGCT CTTAGTCAGC TCACAGGACA CTCACACAGC TAAATGCTAG
49901 GAATCCCTCT GGGAGGTCTA CTGCAATCTT GGAGGTTTAG AATTTGTTCC
49951 GCTTGAACTT TCAGATTATG AGTCCCACTG CACAGCCACC CACCCACCCT
50001 TTTTGTGTGA CACTTGCGTT AGCACAACAT GTCCCTATTT CTCCCTCTAA
50051 TTAGGTCTTT ACCAATTGAT TTAGAGGCCA TGTTCAGTTT CCATAAGCAA
50101 TCAGGTACAT CCTACAGGTG CGTTCATATG GTATCATTTG TCCTCATTCC
50151 TCTGGATGGT TATGATCCTC AAAACTACCT TACCTGTAAC CTATACTAAA
50201 ATATCTTAAT CCTAGCATGT GTAATTCCAA TGAAGTCCTT CCTCTTGAAA
50251 ACTACTCTTG GTTCTGTTCT TGAATTATTT TCTGTCAATA TCTTCCTTGG
50301 AATGACACTG GCTGGGTTTG TGAACTAATC AAACCTCATG AAGGGGTAAC
50351 TAGCTGGCCA GGGCTGAGAG AATGATTAAA TTAGGTCACT GTTTCCTAAA
50401 CACAACCCTT CTCCTATCTT CATGTATTTA TCATATCTGT GCATTTACTT
50451 ATATTTTCCT TTAACAAACA TATTTTAATT AAAGTTATTT AAAAAGGAAA
50501 CATATCAACT ATTGCAAATA GAAAAACCAG TATCACTATT AATAGGTAGA
50551 AGCTATAAAA TTAAAACAAA GCATTGTTAT TATATTCTAG CCATATGCCA
50601 TTGCATTCAT AGCGTTCTGA GCCTGATTCT TGCCTCTTTT TGTTTAAAAT
50651 AAAAGGGAAA TGGCAAGGTA TGGAGATAAA TAATTTACCA AACAGATTTT
50701 CTTTTTCACT TAATAGCAGG AATAAAAGGA AATTTAAAAT GAATGTGCAT
50751 ACGCATTGTG AGTCTGTTGT TTAATGCCAT TCTCACATTG GGAAATTCCA
50801 CTCACCATAC CTGGGTTCTA GTCTTTACTG AGCAATTAAA TTGCTATATG
50851 GCTAGCTCAC CTTCTTGTAC CTCAATTTGT ACATATGTAG AATGAGGTTG
50901 GTGAGTTGAA ATACAGAATT CCTTTAAACC CAAGTTTCTC AATGTTGCTC
50951 ACGGGCAAGC TGCACCTGAA TTTTCTGTGT AGGTATACTT GTTGAAAAAT
51001 GTTAATTTCT AAGCTCCATC CAAGATATTC TGAAAAGAA TTTCTGGAAA
51051 TTTTTCCTGT TTTTATCATT TGTCCAGTTG ACCATGGGAT ATTATAAGAT
51101 TCAAACCATC ACCTTAAAGC CTGTATGATA AACTGAAGAG TAGAACTGAA
51151 CTGTGAATAG GAATCAAGAG GTCTCCGTTT CAGCAGCAAC TTACAGTGTA
51201 AGCTTGCGCT CAGCTAACCA CTCTCATTTC TCCATTTGAG CAGTCAGGTC
51251 ACATTCGGAA GGCTCCAAGT CCCTTCCAAT TCTACAAATA CAGTGTTGGG
51301 TTGCTTTGTT CAAAGTTTTC TCTGAAAATC TGTGCTGAGG CCAGGTGCTT
51351 GGTAAGGTTG AAGGTAGAGA TGGCCAAATG ACAGCTGTGG TCTGTGGGGT
51401 GCATTGTCCC CTCTGGAAAG CCAGCCAGTG CACGTGGAGA CGAGCCAGAG
51451 CTGCCTCTGC CTGCCTTGCC TTAACAGCAT ATATCCTCCA GCAGGGCCAG
51501 CCAGATCGGG CAAGCATCTG CAGAAAGGCT TAGCGAGATC TCTTGCAAAG
51551 TCAGCTTAGG CCCTGCTGGA GAGACAAGAA GGAAGACTTC TATGAATGCT
51601 AAGTGGGTAG AAAGGAAACT ACAGCAGGGT CTGGCTTGGA TTAACTCTTC
51651 ATATCCTGGA TGCCCTGGAT TGAGATCTGA GTCTATGACA TGTGTGTCTT
51701 TTTCAAACTG CCTCCTAATG AAACACATAT ATCCATCATC CAGAGACTAA
51751 AAACTAAGTC TCAACCTGAA CTTCATGGCC CCCCAGAGCA CTCCTAGCCT
51801 GTCCTCTCTG CCTCAACTCC CATGGTTGGC CAACTGGTTC ATTGATCAAC
51851 TGATTAATTC ATCCACCAAT TATTTTTGAG ACAACCACTC TGGGCCAGAC
51901 CCTATGTTAG TTACTGAGAA TATACTTGTG ACCAAGATGA ACAAGGTCTC
51951 TTTTCTCATG AAATTTAAGG GAAAAAATAA ACAAATAAAC GGGACAATCG
52001 CAGATGGGGG AAAGTGCTTT AGAGGGAAAG AATAAGGTAA AGCGATAAAG
52051 ACTAGCAAAG GGGAGGCCTG TCAAAAGAGG GGACATATGA GACCCAAAAA
52101 AGGAGAAAAA CCCAGTCCTA CAAATATTGT GGTAATGTTC CAGGCAAAGG
52151 GAAGAATCTA TACAAGCCTC TGAGGCAACA AAAGGCTTGA GTAGCTTTGG
52201 GAATTGAATG AACGTTGGTG TGGCTGGAGC TAAGTAAGAT AAAGTAAGAA
52251 TGATATGAGA TGATGTAGGA GAGGCAGGCA GTACCCAAAA CCTGCAGGAC
52301 CCGGGAGGTC ACAATTCCCA TTTCCAGGCT CTTCTCTTCA GCCTAACTGC
52351 AATACATTTT TTCTTGAGCA TACCTCTACT TTCCCACTGC CTTCATTTTG
52401 CATGTGCCTA ATGCTTTTGT CTGGCATAAC TTGGCCCCTA ATCACAGTAT
52451 AAGCAAATTC TTCCTCCATT CTTTCGTACC CAGCTCAAAC ATTACCTCCT
52501 TCACAGAGCT TGTCCTAAAT ACCACATTTA TGCTGAGTAG ACATGAGCTT
52551 TTCCTTCTTC TGACCACTCA ACTTCCCCTG AGCTTCATTT ACTCTTTCTC
52601 TTTTGTTCTC ATTCCCAAGA TTAACTTTCA GTCTAAAAGT TCCTTGTGGG
52651 AAGAGGAAAG GACCTAAATAT TTGAAGGACA CTATTTGTGC CAGGTGACAT
52701 GCTAGGAGCT TCATATATCC CATTTCATTC ATGACTATAG TCTTGTAAAT
52751 TAGGTGTTAT TAGCCTCATT TTAGAGGTAA GAAACCAGTG TTAAATTACT
52801 TGAACTACAG CACAAAACTA CATGATGCAG GTATTAACTC TAAATTCCCT
52851 CAGTATACCT AGCATTGCCC CTTGCTCATC ATTAGTACTA ATTTCTCGAA
52901 GTGACTATAC ACTCTGGCAA CTTCTAATCC TCATTTAAGA CCAAGAAAAG
52951 GCCGGACACT GTGGCTCACG CCTGTAATCC CAGCACTTTG GGAGGTCAAA
53001 GCAGGCGGAT CAAGAGGTCA AGAGATTGAG ACCATCCTGG CCAACATAGT
53051 GAAACCCCAT CTCTACTAAA AATACAAAAA TTAGCTGGAC ATGGTGGCCC
53101 ACACCTGTAG TCTCAGCTGC TTGAGAGGCT GAGGCAGGAG AATCGCTTGA
53151 ACATGGGAGG TGGAGGTTGC AGTGAGCTGA GATCACGCCA CTGCACACCA
53201 GCCGGGTGAC AGAACGAGAT CCTGTTTCAA AAAAAAAAAA AAAAAAAAAA
```

FIGURE 3, page 15 of 122

```
53251 CAAGAAAAGT GTTGCCAGGT ATGGGGCACA TACCTAGAAC TGTGGCCATT
53301 CATCCTGCAA CTTGAACTTT GGGCATCACC TTGATCCCTG ATACCTACTT
53351 CTCTTCATCC CAATCTGCTC TGTCCTTCTG GGCCAGCCTG TTCTTCCTGA
53401 TGATAAATAA GTATTGAACC TGAGCCTATT ATACCCCAGG CCTCAGCTGA
53451 AGTGTCTATC CCAAAGTGCT TGATGTTCAG AGAGTAGCTC TAACCAAACT
53501 TTCCCCATCC AGAAGGATAT CCAAAGACAA ACTCATTGTC TATAACACCA
53551 AGAGATAGAA CCCCTATAAG TCAAACTTCT ATGCCTCCCC TACATTCTCC
53601 ACTTTGTAGA GAGATATTCA AATCCTCTCT TTTCCTGTTA ATTACTGAGC
53651 AGCTGTGGAA TCAGCATGGA TCACAATTCT GCCTTCCTTT TGAAGGAATA
53701 ACATGCAAGC AGGAGTTGCC ACATTGTGAT CATGGACTTA CTTCAGATGT
53751 ATAATAAATG ACATCCCATG AGAATGGCTT GACAGCAGCT GATGGCACTT
53801 GGCAAAGCAT TCTTTATTTG CCATAGGATG AAATTATCAC TTTACTAAGA
53851 GTAAGTGTTT ACAAGCAACT GGAGATCAGG AACTAGAGAA AATAATTCCA
53901 TGTCCCAGAT TGAAGGTTTA CAGCAGATAT ACAGTGGAGT GAACTAGCAA
53951 TCACAGAGTC TAGTCTTTGC TCTGCCATTT GCTAGCTATG AAGCCTTGGC
54001 TAACTTCATT TCATTTTCTA TGATTCATCT CATGGTACCT CCTCCTAGAA
54051 GATTTCCTTA ACCACTTCCT CTTCTCCCAG TCTGGCCAGG TGGCCCTCCT
54101 ATGTCCTTCC ATAGTGCCTT TTTTTTTCAT TTATCACATT ATATTATAAT
54151 AGTTATATAA ACACTTTCGT CTCTCACTAA ATTATGTGAG TAAAGTATAG
54201 TGATTAAGAA CAAGAATGTT ATAATCGAC AGATATGGGT TGGAACCAGG
54251 GTTTGGCTGT CATCTAGCTA TCTGATAAAA ATACACTTCT TAGAGCATTG
54301 TTATAAGGAT TAAGCATACA TAAAGCAATT AGCATAGAGT ATGGGTCATA
54351 ACTAGTAAAT GTTTTGCCTT TTATTTTTGC CTTTATAGCC ACAGTGGCTA
54401 ACGCAATACC TAGCACACAT GGTAGGAGGG TTGGTGATGG TGATGGAGAT
54451 GTGATGGAGG TGGTGGTGAT CCTGGTGATA CCTGAGTGGA GGTAATGGTG
54501 GCAATGTTGG AATGGTGACA ATGTTGTAAT CCCAGTGGTA ATATTATAAT
54551 GGTGGCAGTT GTGGTGGTGG TGGTGATGAT GATGATAGTA ACAAATGAGG
54601 ATGATAAGAA TCAACAGCTA ACATTTGTAG AGAGTTTACT ATTGTATATA
54651 CAAGGCATGG TACTAAGTAC TTGCATATAT CTAATTTCAT CCTTTTGACT
54701 TCTTTTAGAT ATGGCCAGTA CTCCACATCT TTCAAGTGGG TGAACTGAGG
54751 TTTCAGAAGT TGAGTAATTT CCTGAGAGCC TACATTTAGT AAACTAAGAC
54801 AAAGTCAGAA TTTGATACAG GCCATATGAT GTCATCATAT ATATGTAAAG
54851 TGCTCAACTG TTGGTTACTT GAATGAGGAA GGAAAGAAGG AAGAAAGAGA
54901 AGGAGTGAGG GAGGGAGGAA TTTACTTGTT TTCTAATCTT AAGATTCCTT
54951 TTCTGAAAAT AGAGATAATT CTAGCATTTA TGGAAATCAA ATGAGATTAA
55001 AAAAAGTCAA AGCTCTTTGA AAACTGTCAA GTCTTCTCTA TGTACGAGGG
55051 CTAAACCATC AGAGGCAGCT TCATAATTAC TCATTCATTC ATTCAATAGA
55101 TATTTGGTTT TCTGTTTTAG GCACTAGAAT ATAGTGGGCA AAACAAACTA
55151 AAGTGCCTGC CCTCAGTGAG CTTTCAGTCG AGTCTAGTGA CAGACAAGCA
55201 AATGCCAGGT GAAATATATA GTCCTGTGGG AAAAAATAAA GCATGGAGGG
55251 GGTGAGGGAA TATGTGTGTA TGTTGGGGGT GGGGTCACTC TTTAAATAGG
55301 GTGGTGAGGG AAGGCCTCTG ATAAGGTGAT ATCTGAGCAG GGCCTGAAAA
55351 AGGTAAGCCA GGGAGTCACA CAGAATCTGG GAAAAAAGTG TTTTATATCC
55401 CACAGGGGAG TTTAAAAGTC AAATGAGGAA TGATATCACT GTGATAAGAA
55451 TGCTAGGAAT GGGATTATGC AGGAACCCCA AGGCCTGCTG CCAGTGACTA
55501 TGCAGTCAAG TCAGTCTTTT CCTTGGTAAC CTCCTCTGGT GGGGTCTCTG
55551 AAGGCTCAGT CAAGGTGTGA TGTCCCAGGG GAGATACTAT TATCTGAAAG
55601 CATGGTTCCT CTGGCAACAG GCAATGGGTC TGAGGGAGAT ATCTTCTATT
55651 CTCCATTCAA CCATCCATGA GCATGATGAC ACTAGGCAGG TCATCTGTGC
55701 TCATGGCATC ACCCCTTCCA GCTGGGAAAG ACAAAGGAAA GTCAGGGAGG
55751 TTCTCCCCAC ATCAAATGGA AAAGTCCTGC TCCACCAGGG TCTATAATGA
55801 AATGGTTTAT TTAAGTCTAT AATGACCTAA GATAAAGTTA ATTTACTTTA
55851 TTCAGATTTA CAGACATTAC CAAATTACAT AGGATTGCAA ACACAGGAGA
55901 AGATAAAATA AATTACCAAC CAGATTGAAG AGCTTAGAGA AATAGGTAAA
55951 TAGTCATGGG AAGAGATTTA ATTTAGATAA ACCAAAGGCA GGATATCTGG
56001 AAAATGCCAA GGTCAGGGAA AAGCCGAGAG GAAAAGATAG CTAGTAAGAT
56051 GGAAGAGACA TGGAAAGGAT TCAGAAAATG ACGTTGGTGA TAGTGAGTGT
56101 GGCCAGTATT ATGATAAAGA TAGAGGAAAT GGGAAAGATA TTACTGAAAA
56151 ATATGGCTTC TCCTTAGAAT CCCAAAATAA ATGAGGTAAT TTGTGGAAAG
56201 CAGTGCCAGA CTGGATTCTG TGGTCTTAGT TCCAAGTCTG CTAGGAACTG
56251 CCTCTGCAAC TTGGGAAAGC TTTTTGATTT TTTTCTAACC TTTAGCTTCC
56301 TCTTCTGTTA TGACATACAA TACGGTTCTA AGTCTAAATG TTTCTAGTTC
56351 TCTTGTGTTT AAGGAAGGCG CCATGTGCTC TGAGGAGACC CTGAATCCAT
56401 CCCTGGTCCT CCTGGCTGAC CTTAATAGAA ACATTGAAAG ATGGAGATTC
56451 ATGACAAGTA GTCAAACGGA AAGGCATTCA TTTTGGAGAT GGATCAAGGG
56501 TCCAGGCTCA TCGGAGACAC TGAAAAAGTT GAAAGGTTGC AAAATTGAGG
56551 GAGAACGCACA GTTATGATAG TTCAGTATAA CTGGGTTTTG CCAGAGGTTG
56601 TAGAAAAAAG TTAAAGATTG ATTTGAAATG GTTGAGGGGT ATGTACAATG
56651 CAGAAGGAGG GGTGAGTTAA ATAAGACAAT TTATAGGCTG GATGTCTTCA
56701 GGGACTGGGG GGAAGTTTGG GTATCTTTAA GATGGCATGG CAGTCTGACA
56751 TACAGGAATA GTTGTATCCA CTGCAAATCA TAACCTTCTA TGCATTTCAG
```

```
56801 GGTCGGCTTA AGGATATTTG CAAAGAACAT ACTGGAGGGA GAACATCAGA
56851 CTTGTCCTAG TTGCTTGGGT CCCGGGTTAG TTCACCACTA CAGCAATGTG
56901 GGAGCTAACT GCATGCTAAG CTTGGCATGC AGGGATTGGC AAACCTTTTC
56951 TGTAAAAACC CAGATAGTAA ATGTTTTAGA TTTTGTGAGC CATACGGTCT
57001 CTGTCACAAT TACTCAACTT TGCTGCTGGA GAGTGAAGGC AGCAACTGAT
57051 TGGTCCCTCT TATAATTGAA GCTCCTGAGA TGGCATTCTC CTGAATGATA
57101 ATATTTAAAT GAAGGCCATA GCTGTATTCC AATAAAACTT TATTTACAAA
57151 CAGATAGCTG AATTTGGCCC ACACACCATA GTCGGCCAAC CCCTGTTTAA
57201 GGCATGATGG CCCTGCCTAT TAGCAAATAT GTCCTCATCA GTGTCCTGAA
57251 ACATGTTCAA TTTTATGTGT AACTCCTCCC TATTGGGAAC AAAGTGAGGG
57301 CCAACAATTC TTTTCCAGTA GGTGGTCCAA AGAATATAAT TACTGAGGCG
57351 TGTGTCACTG GAAATGCATT CCAATATAAC AAACATCTTA GGTACTTAAC
57401 TTGTTCATTG ATGTTTGAGG ATGAATTTGT AGGGGAACAT TAGATGTTCG
57451 TATGATTGAC CTATGTTGAA AGGAGACTTA CTAAGGTAGA GGCAGGTTTT
57501 CACTTTCTCC AAGAAGGAAG AGTTGAAGAA GTCCCTTCAA TCTAGAGGAA
57551 TCATCATTGT GCAAACATCA GGGAAGAGAT GGAGCAAAGT TAAATGGCTG
57601 GAAGTCACAG GGAGCTCTGT TATGGCTAGT TGTAACACAG ATTATGCACC
57651 TGGAGCTTTA CATTTTATAA AATTTTTTGG AAGTGCTTTG TTACCTTACT
57701 TATCAGAAGA TGCTAAAGTC ATTCCCATAG GTTCTCCATG AATGAAGGAA
57751 TTCAATAATT ATTACCGATG ATGATAATTT ATGCTTATTA TAATGTAATG
57801 GTCATTAGCA CAGCAGCAGC CATTCACTGA GGCACTGTGC CCAGGGCTCC
57851 ACAAGCATCA TCTCAAGTTG TTCCAACAGT CATGGGAAGC AGGTATGGGG
57901 AACGTCTTAC AGATGAAGAA ATTGAGAGTC AGGTTTGATA ATTGGCCCAA
57951 GGAAACACAG TTTATTATAA GTGCCAAAGT CAGGCCTCAA ACTCAGCTCT
58001 GCTCCCACAG CTGACACTCC TAACCAACAC ATTGTCCTAT TGCACAACTG
58051 CAGCATTCTT TCATTAGTGG GTATGTTAAT GTGAAGAACC AGCACTTGGA
58101 CCAGTGCCTT ATAAGGATCC TTTGAAACCA AGATTTTATT GTGGTTGAAG
58151 GGCAGAGAGC TAAATCACCA AAATGTGTAA GTAGAGACAG ACCAGAATGT
58201 AATCTCCATG AAAGCAATGT CCTTCTCTGT TTTTTAATTT TTTCACCATG
58251 TTATCCCTAG CACTTAGTTG TGTCTGATAA ATATTTGAAT AAATGCATCA
58301 GTATGTGAAC ATTATTTGGA ATTATTTTTT CTTTTTAATA TCAAAAATCT
58351 CATAACCACC TAGGCCAAGC TTAACCCGTG GGCCTCAGGC CGCATGCAGC
58401 CCAACACGGC TTTGAATGAG GCCCAATACA AATTTGTAAA GTTTCTTAAA
58451 ACATTTTGAG ACTTTTTGTG TGATTTTTTT TTTAGCTCAT CAGCTATTGT
58501 TAGTGTTAGT GTATGTGATG TGTGGTCCAA GACAATGCTT CTTCTTTCAA
58551 TGCAGCCCAG AGAAGCCAAA AGATTGGACA CCCCTGATCT AGCCTGTCTC
58601 AATGTCTAGG CTTTGAGACA CCCCTGATCT AGGCTATAGA AATGTCTCCT
58651 ATTTCTCTCT CTTTTAACCA CATAGTTCAA TACCCTGGAC ACAGTAGGCA
58701 CTTAAGGAAT ATTTGCTAAG GATGGGGCAT GATAGCTGAC CCTTAATAAA
58751 TAAAGTGCTA CATTGCTACA GTAATCAACA ACCTTCTACC CTTCCTAGCT
58801 CCTGTGACAG ATGCAACTAC TTCTTATTCC CCATGTGGGA GTTGTAACTC
58851 AACACTTCTC TCCCCTATTT ATGGATGCAG ATTGGAAAAT ACATTAGAAA
58901 GGGAGAAGCC AAAATATCCT CTGATTTATA ATCAGTACTT TGGTTGAAAC
58951 TTTCATGACT ATATTAGTAA TAGCTAGTTA CCTGTAACAC AGTTTAGAGC
59001 CATTAATAAA ATACCTCGTG GAACTTTTAT GTGGCTCCAT GTAGCAGAGC
59051 TCAGACCTGT GGAAGAACCT GGAGTAATTA GCTGGAAGGA TGTTATCACA
59101 GTTAGCACCA TCCAAAGAGT GAATCCACTG CAGAGTGAAC TAATGAGCCC
59151 TGGTCTGAGA GACACTGAAT CAGAGGTGAC CAGGAGTCAG GTATAGAGGG
59201 GCTATACTAG GTATAGGTCA GATATAATTA TCACTAAAGC CCCTTTAAAA
59251 TATAAACGTC CTAGATTTTT GACATACCCC ATGTCTCCAT TTATTGTGAC
59301 ATTGTCTTTT GGTAAATGAA CCCCTTCTCA TAAAAAAAAT TTTTGTTGAA
59351 ATATAATATA CATCACTTGC ATGAATTTTT ACTCCTGCTT GAGCAGGCTG
59401 AGCCTGGTTG GTAATGTTAG CAGGATCTCA GTCTATGGCA GACATACTGA
59451 CTCTTCCTTT GCTTTTAAGG TGGTGTGATT TCAACTAACA GAATTCATGT
59501 TGTATTAGAC CACATAAGCT CATGTCCTGG AAAGAGAGCC ACCTTGCCAA
59551 CCAGTTCATA AAAATTAGCT CAGCACTTTC TCGTGAGCTC CGCATGGTCC
59601 TGGGATGGCC TGAGGTGGGT CCCAGCAATA TGTATTTTTT AAAAATCTTC
59651 TCAATTGTGA AACACAGTTC TGAAATAGAA CTTCATCATT TGGGGTCTGC
59701 AAGGCGAATG GTGTTGTACC ATTGTATTCA CAAGTAAACT GAGACCCAGA
59751 GACTAAATGT CCCTGTTGTC AGAGGTACAG CAGTAGTTAG GGGCATATTT
59801 GGGACTAAAA TTCATATTAG TTTTCTCTAG ATACAGAAAT ATTTCAGTCA
59851 GGCCAATTTT TATACAAAAC TAACTTCAGG ACTGATGGTT TAGCCAGTTG
59901 TTGGTCAGTT ATATGTGTAG GTTTGTGTGT TATTGTTATA AAAAGCAGTA
59951 TCCTTTCAAA TTATATGAGG GATACATGTT TATCATGGGA AACTATAAAA
60001 TGTGAGAAAA AGGGGAATAG AATCAAAGTA TCTATCATTG CACAACTCTG
60051 AGATAACCCT CTTATTATGT TGCTATATGT CCCTTTAGAC CTGCTATTCA
60101 TATGTTGGGT TTTTTATTAT TTTCTAAGAC TGGGATTATG GTGTATGCAC
60151 AGTTTTTCAT TCTTCACTGT TATTATATTA TGAGCATCTT TCATGTTAAT
60201 AAATAGGCAT TCACACTAGC TCTTAAATAG CTATGTCGAA TTCCTTGATG
60251 TAATATATCA TAATGTGTTC AACAGAGTCT TTATTGGATG TTTAGGATGT
60301 CTGTGTATTT TAAAAACAAC AAACTTGAAT AAATACTATA CAACTTCTAA
```

FIGURE 3, page 17 of 122

```
60351 AGCTCAGAAG TGAGATATTT AGGTAGCAAA CAGCTCTGAT GAACTTAAAG
60401 AGTTAACAAT CAGCTAACCA GAAAATGAGC TCCCCCTCCT TTCAACCAGG
60451 TTAAAACCTG GTTCTTTCAA CCAGGCTGGA TAATTGAGAT GGTACACATT
60501 AATGATCCCT GTTCTCATCA TTGTTCAGTG CCAGGCATGG CCAACACTTT
60551 GAAATATTAG TAATCAGGCT CACTGAGTTT CTTTTCAGGT TTGAAACAGA
60601 GCTCTGCACA ATACATTATT ACTTGTGGAT CCTTGAGACT TCTCTGCCAC
60651 CTCCAAGAGC AGAAGCAGGG TCTTCCGAGG TTAACAGTCA CCACTGGGTT
60701 TTAATCAGGA AAAAGAAAGA AAGCCATAAA TTTAAACTCT GAAAAACTCA
60751 GTACCCACCC AGAAACAGCA ACAAAATCAG ATTGGAGTCT GGAAGAAAGG
60801 TCCTCTAGAC TTGAGAAAGT TCAGGGTGAA ATTGGGTTTA TTGTGGGTCT
60851 GAGATCAGAA AGTAAAATTC TAAAGAGCTC AAGGCAACAA CATCCAAAAA
60901 GTGGGCAAAA ATGGCCAAAG AATGGACTGT GGTATTTTCT GGGAAAGAAA
60951 ACGATTTCCC CTCCCTTTTC AAAAATTTTC CAGGAAACTA ATTGTCAGGC
61001 AACCCACTTG TAGAATGGAA GCATCTCTCA AAGTGATCTA GAAATTCCAA
61051 GAAGATTTTT TTTCTACTGT TATGATGCCC AGGGGAGATA GAAGGGTGGC
61101 TTGCAAAGTG GACTCAGGTC TGCATTCCAA AACTGCCTTC ATTCCCTTTA
61151 TGTGGGACTA AGAAAATTAT ATTATCCATC TAGGCATTTG TCCTCCATCC
61201 ATTAAATAAG AAGTAGAGAG GCGTTACAGT ACTCATCAAG AATTCCAGTT
61251 CTATCGCTTA CTATCGGTAT GAAATTGGAT CATCTCTTTA ATCTCTTTGA
61301 GTCTCAATTT CCAGTCTTTA AAATAGAGAC AAAAATATGT TCCTTAGAAG
61351 ATTGCATTGA ATATTAAAAT ACAATGAGCT ATAGAGAAAG CTTAGGCTAG
61401 GATCTGTGAC ATGGTTGGTG TTTAATAATT ACAGGATTCA GCAGGTGTTT
61451 TATTTTTTTT TCCTTTCCAG CTCCAAATTA TTCTATGTCA GGTGTTAGGG
61501 GTATATAGAT ATGCTAAGAT ATGTTCATTT CCCACCAGGG AGTCGAGTCC
61551 ACTGTGGGGT AAAGACGTGT ACACACAGCT GTCCTAGAAG ATCAAGAAGT
61601 AGAGAGCTGT GTCATGAAGG CTCTCCAGGG GTGAATGGGA GAGGCTAACA
61651 GTAGAGGCAG GCATTGGGGT GGGCTTTAAA AGATGAAAAA AAAAATTAAG
61701 GCAGGGTAGG AGCAGAAGCA CTCAGATAAG GAAAAAATGG CACAACTGGT
61751 TGGATGAATT GTTACTATTA TTGCTTGAAT GGCACAACTG GTTGGATGAA
61801 TTGTTACTAT TATTGTACCT ATTCTAATAG GTACAATTGT TAAGGTAAAG
61851 GAAAAAACCA TATTTGCAAC TAGAACCAAA TCAACTACTG CTAGAAAATT
61901 TAAAATCTTC CTTCAATATC AAGGTAGAAA AAGCTTAGCA TCTTCATTTT
61951 GCTACTAACA TTCTGACCTT GGACAAATAA CTTTACCTGT TCCTCAGCTA
62001 AAATGAGGAT GTAAATCCTA ACCTGTCTAT CTTAATAGGA TGTTGTAAGA
62051 ATTAACTGAA ATAATGTACA GTCTGCCTCA CAATCATCTG GACGGCTTGA
62101 GAAAGCACAG ATTGCCAGAT CCCACCCCCA GAGGTTCTAA TTCAGTAGGT
62151 CTGGGGTTGG ACCCAAGAAT TTATATTCTT TTTTATTATG ATGATGATTA
62201 TTATACTTTA AGTTTTAGGG TACATGTGCA CAATGTGCAG GTTAGTTACA
62251 TATGTATACA ATGAATTTAT ATTCTTAACA AGCTCTCAAG TGATGCTGAT
62301 ATAGCTGGTC TGGGGATTAC AGTAAGAAAA CCACTGCTTT AGGTCAATGC
62351 AGTTTTTTTT AAAAGCTATT ATTCATAACT GGCTCAAGAG TCATGTAAGT
62401 GTTGATTATG TTTTATTATG TGTCTAGACC CTTAATAGAC TACTCAGGAT
62451 ATGCACAAAT AGAAGATGTA ATATTTTCTG TAGCATTCCC TACACCAAAT
62501 CGGCCTTGCT CGGTCATGCA TAGTTAATGT ATGTGTTGAT TTTATTTGTC
62551 TTCGTGTGGC TTCTAGTCTC ACTAGAAAGA CATACATTTA TTTGAATGTT
62601 GTAGAATGAT ATTATTCATT GGAATAAAAT CGGATCTTTT TACAGTTTTT
62651 TTTGTTTGTT TGTTTCTTAA TGAGCAGGCC TATGATTCCT AAAGGACTTT
62701 TTATTTTATT TCATTTGAAC CTTTGATAGA AACTGCATCT TTCATGTGAC
62751 CACTCTCCAT TTTTCTGCTC ATATGACCAC ATTTCCCAGT AGTCTTTAAA
62801 GGCTCCAGTT TGGATGGGAT TTCGATTAAT GGAAGAGAAC AGATAGCTCT
62851 GTAAATAGAG CCAGATGTCT CTTGCAATAT CTGAAATGAA CTGTCTCAAC
62901 CATCAGAACT GTAAATCACC TTCAGAAGGC TCCTTCTCCC AGGAGTAGTC
62951 TTTGCATTAT TCATAGCCCT TTTGCTGTAG TACATTCTTG TCTCATGAAG
63001 ATTACAGCCA ATCACTATGC TTTCATAGCC CATCCTCCTC CCTGAACCCC
63051 TGCTTTCATG CTGTGTCATA GCCTTGGCAC TCTGTTCTTT GAACTTCTTT
63101 GAGGAGTAGT GTTTTCCAGG ACCTAGCTTC AGTTATGCCA AGAGTGTTTC
63151 CTTTCTGTGA TCATGATACA TTGTAAAGTA TGTGGTTCCT TTTTCAAAGG
63201 GAAAATACTA TAGTCACCCT AATTCCTTCA AGAAAGAAGG CAGAGAAAGC
63251 CCCCCCTCAT CCTCTCCGAA GCAGTCACAT GCTCTATTCA GAATGAATCA
63301 TCACTTTGGA ATTGTCTGCC AGTGTTTTGT GGGGTGAGGC TCAGACTCTT
63351 TCTATGGGTA GATCTGTAGG CCTGTTTTCT CTGCACCAGA GGTCCCAAAC
63401 TGGTGTTCTA TGGATTGCAT CCAGTGATTT TATGTGTAGC ATAACTTTTT
63451 AAGAGGAAGA GAGAAGAAAA TTGACTTTGC GATCAACATT ACAAAAAAAC
63501 ATCATGAGAC TTTGAATAGA AATTTGGATT TTCAGCAAAA AAAAGAAAAA
63551 AAAAAAAGAA GAAGGTTTGG CAGTACTGGA CTCCCATCTT TAAGGGTAAC
63601 AGCCGAATGC TGGCCACGTC CTGTAAGAAC CCACACTCTC CAGTTTGCTG
63651 CTGTCCATAC CAGCTTGTGT GACTCCTTTA CATTACCTGC TTGACTCCTA
63701 AAGGTATTTC AATTAGTGGC CTGTTTTTGC TCTTTTTGGC AAGTTCACAG
63751 ACTTACAGAG TTTGAAAGCT AAAGGAGTCC CTGAGAACAA GGATTTTCTA
63801 ATGTTACTTC ACATCAAAAT CACCTATACC CTATAACCAG GCTGCATCCA
63851 GTACCAATTA AATAAGAATC TCTGGGGAGG ACCAAGCTGT CAGGATTTTT
```

```
63901 TTTTTTAATT CCCCAGATGA TTCCAGTATA CAGATCAGTT CATCTAAGAA
63951 CCAGTACCTT GGAAGAATAC TACTCAGAAT TTATTGTGCA TACAAATCAC
64001 CTGGAGATTT GTTAAAATGC AGATTCTGTG GGGGCAGGGT CTAAGGTTTA
64051 GCATTTCTTA CAAGCCAATG CTTCTGGTCC CCCAATCATA TTTTGCATAG
64101 CAAAGCCTAA GAGATCTTCT GGTCTGTCCT TTTTCATAAG TTCAAAGAGA
64151 TGTCAAAATG AAGCTTTCCT TGTTAAGTTAT CTAAGCTTAG GATGAATTAT
64201 TTATTTATTT CTCCAGCTTT TCTTTTCCAA ACAACCTTTT TCTGTAGAAA
64251 CAGGGTCTTG CTATGTTGCC CTGGCTGGTT TCAAACTCTT GGCCTCAAGC
64301 AATACTCCCA CCTTAGCCTC CCAAAGTGCC AGGATTACAG GCATGAGTCA
64351 CTGCATCTAG CCAGAGTTTG CTTTTAAAAG CATAAATGAC AGTGGTGTCA
64401 AGGATATTCC TGTGGAAAGT AGTTTTTCCT CTTATTTACT TACATTCCAA
64451 CATTCCTTCT TAACTAAAAG AGAAAGAAGT GGGTCTTCAG CCAAAAGAAC
64501 ATTATTTCAC CCTGGTGATG CTCATGGGAT TCCCATTTTA TGATGGTAGA
64551 TGTGTTACTG GTGGTGAATC CATACAGGTC TGCAGCAACC TCAATTCTTG
64601 CCTCCTCAAA AGAAAGAATT CGAATGAGAG GCATAAGACA GAGTGAAAGA
64651 CTGAGGCAGG TTTCAGAGCA GGAGTGAATG TTTATTAAAA AGCTTTAGAA
64701 CAGGAATGAA AGAAAGTAAA GTACACTTGG AAGAGGGTTA ACGGGGAGAC
64751 TTGAGAGACC AAGTGCATGG TTTGACCTCT GACTTGGGGT TTTATGTGCT
64801 GGTGTGCTTC GGGGGTCTTA CATTACTTCT CCACTGATTC TTCCATTGGG
64851 ATGGACTGTC CATATGCACA GTGGCCTGTT AGTGCTTGTG AGGAGCCGCA
64901 TGCACAGTGT GTTTACTGAA GTTGTATCCA TGCTCACGTG AGGCATTCTT
64951 CCCTTACCAG TATTCGTAGA ACCATATGCC AGTTAAACTC CACCATTTTG
65001 CCTCTTAGTG TGCATGCTTG AGCTCATTCA CCCAGTTTCT GAGATATTGG
65051 GAAAATGCGA TCACCAGTTT CAGGTTTTTC TATCCATTGG GAAACTGCCT
65101 TTCCCTGGCA CTGGCTGCAA CCAATTATTA TTTTAGAGAG ACAGTTTAAT
65151 AATCGCCTAT CATCTGATGG TTGCCTGACA TTTCTTGTGG TGGCAGCAGG
65201 GGGGACCCTC TCCTGTCCTG CTCGTGTCTG ACTAGCTACC TACTGTAATA
65251 AATGGGGTGC AGATTAGAAA ACAGGTCCTT ACCCTCCCCC TTCCCCACCC
65301 AGTTATTGCT CAAGATCACA TAATTATGAA ATAGAAGAGC TGATACATAG
65351 AGAAAAATAG TTCCAGTTGT CTTTATAAGT GGTTCAAAAC TCTGTGAGCT
65401 TCTTTGATGG GTTGAGTTGT AAGTTATGTG GCAGCCTCTC CTTTCAGGTG
65451 AGAATGAAGC AGTCAGCCAG GTCTAATTGC CTAGTTATAT GAGTGTACTG
65501 AGTAGGTAAC TCTCTCAATA GTTTAATTTG AGGTCTGCAA TTGGAGAGTT
65551 GATGCTGAAA CATTTCTCAG GACCAGAAAT TTCCTTTCAG GCTAGCCACT
65601 TCTCTGAGCT GAAAATGCTG TCATGGTGAA TTCATTCTTC TAGATCCATG
65651 TTTTTTAAGT ATATTATCAA AGGACTATGT GTATCGGAAT CCCTTGAGAC
65701 TCTAGTTAAT GACTGTCCAC GTCCCACTCC CAGAGATTCC GAGTCAGTAA
65751 ATCTGGGGTG GGGCTCAGGA AGTGGTTTTT TGTTGTTGTT GCTGCTTTGT
65801 TTTGTTTTTG AGATGGAGTT TTACTCTGTT GCCCAGGCTG GAATGCAGTG
65851 GCGTGATCTT GGCTCACTGC AACCTCTGCC TCCCAGGTTC AAGCGATTCT
65901 CCTGCCTCAG CCTCCCAAGT AGCTGGGATT ACAGGTGCCC ACCAGCATGC
65951 CAGGCTAATT TTTATATTTT TAGTAGAGAC GGGGTTCCCC CATGTTGGCC
66001 AGGCTGGTCA CAAACTGCTG ACCTCACATG ATCTGCCCAC CTCAGCCTCC
66051 CAAAGTGCTG GAATTACAGG CATGAGCCAC TGCACCTGGC CAGGAAGTGG
66101 CATTTTTCAG AAAACTCATC CAAGTGATTT TGATGCAGGT AGTAGGCCAG
66151 ATGCAGAGAA ATATGATATA AAGGTAAATG TCCTTTCTTC CCTGTCTACT
66201 AGTATAGTGA CCATTTTCTC CTGAATCAAA TACTGCAGCC TTGAAACTAG
66251 TTAAAACCAG GGTTGTGCCA TACTTCTACT CAGCTCAGAA GGAGGCTCTC
66301 CATTTGAGAA CACATGGGTT CCTTTTGCTA CCAGGACATG CAGCTTGGAA
66351 CCTCTGATTC TCAGTGATGT AGGCATTTTC TTAGCATACA GCAGCCTGGA
66401 ATTTATCATA ATGTACATGT CACAGGAGGA TATGAAATAG AGTAAACACC
66451 TTTTTTATAG ACTTTAGATT TTGAGGTCTC ACTACAGCAG CGTTTTGCAA
66501 CTTTTTAAAA AAGAACCAAT AATGATCTCT TTGGATGTTC ATAAAAGCCT
66551 CACACTCTGC TGTCCCATAC TAGATTCTGA TATACCTAAC TTTGAAGGAT
66601 GTCCACCATT GAGTGTCACT ACATACAGGG AGCAAATTCC ATTTCATTTT
66651 TCGCGCATTC CTACCAACGA AGAGAAATTT GAGGCACATT ATTTTAGGAA
66701 ATTTGTACCA TAAAAACAAT AGGTATACAT CAATGTTTTA TCATTTATAA
66751 TGTTTCAACC TTAATATGTT TTTGACACTG CTCCTGCTGC ACTGGAGGAA
66801 TGTTGTAATA GATTGTTACA TAACCACTTC TCCTGGCAGG TATTTTCCCC
66851 CTTCCTTATT CCACTAAGAC TCACTTGCAA CGCAAAGACC AGGGCCTCAT
66901 GGAAGAAGGC AGCTGGGCAC AAGCCTGTTG CCATGGAAAG CTTAGGGCGG
66951 GAAGCGATTG ATTGGTCTCT GCATACAGAG ACTGATCTAG AAGGCTTCAG
67001 TGTGTCTGAA TGGACCTGTC TGGGCTGGAA TTTCAGTCAG TCTGACAGAC
67051 TGCTAAAGGA GACTCAGGTG TACACTTCAG CAACTTGATA ACTCTTCCCC
67101 AGCTGAAAGT CGAATCATTT GATCCAACGG GAAAGAAGCT AAAATTGTCC
67151 TGACAGCTAA AGAGCGATCT GACCTTTGTG ATCAGGAGGA GAATTTCTTG
67201 TGATACAGAA AGTGAAAGTA GAAACTGGAA TGATGGTATT GATGATGAAG
67251 GCATTTAGAG CAGCAGGCAC TGCCATTCAT TAAAAGATTG CACTGTGTCA
67301 GGCACATGCT TTATCCTATT GAACCATCAT GCCAAACTTG GGACACTTAG
67351 GTATCATTGT TTTTCATTTT CCATTAAGAA CTTGAGGATT AAAGCTGTTA
67401 ATCTATCTGT TCATGGTGAA ATGAGTAGTA TGTGGCCTGG GTTTGAACCT
```

```
67451 TTGTTATAGC TGCAATTTTT TCAGAGCTTT TAATTGTTGA ACTACACGGT
67501 GTTTCTGGGG CTATTCTTGA TCTTTGCACA GTGTGGGGGC GAAAGTTGGT
67551 CCTTTTAGGA ATTCAACTAT TCTCTCATTT AGTTATGGCC AAGAAAGGAG
67601 AGGCTCAGAG ATCAGTTGGT GCCTCAAAAG GTCGCTCTTC CCTGCAGCCG
67651 ACTTAATATG TCTCCTAGCT CCCAGTCCAG TGCTCCAGCA AGATCCGGAA
67701 GCTAAATATT CCCTGAAGCC TTTATAATCT ATTGAGAATA CACAACAGAG
67751 TTGCTGGGAG TTTTTCCAAG GCAGTAAGTC TCATTTTTCT TATTAGTTTG
67801 GATCCCCTGA ACCCTTAAGG TAGTATCTCA AATGCAGTTA AGTGTTCAAC
67851 CAATATTTGT TGCAAGAATA AACATTACTA GTAAGAAATG TGATCTTGGA
67901 GACAATATTT TATGTTCCTA GTCTCTAGTT TTCCTATTTT TGAAATAAGC
67951 AGGTGTGTTC TAGATATTTC GAAAGGCCCT TCCACTTTAA AACTTATTTA
68001 ACTCTAGAGC AAGGATCTCT CACCTGAAGT CTGAAGATTG GTCTATGTAC
68051 TCTCTGTAAC CCTACATGAA ATGCTTTAAA ACTTCATTTA CAGTTATGTG
68101 TCCATTAACA ATTGGAATAC ATTCAGAGAA ATGTGTCAGT GGACAATTTC
68151 ACCATTGCTT GAATATCACA GAGTGTTACT TACACAAATC TAAATGGTGT
68201 AGCCTACTAC ACACCTAGGC TATATTGTAT GATACAGATT ATAGCTCCTA
68251 GACTACAAAC CTGTGCAGCA TGTTACTGTA CTGAATACTG AGGCAAGTGT
68301 AACACAATGG TAAGTATTTG TGTATCTAAA TATATCTAAA CATAGTAAAG
68351 GTACAGTTAA AATATAATAT AAAAGATGAA AACTAGTACA CCTGTATAAG
68401 GCACTTACCA TGAATGGAGC TTGCAGAACT GGACGTTGCT CTGGTGAGTC
68451 AGTGAGTGAA TGATGAATGA ATGTGAAGGC CTAGGACATT ACTATGCACT
68501 ACTATAGAGT TTATAAACAC TCCACGGTTA GGCTACACTA AATTTATTTA
68551 GAAGTCTATT TTTATTTCAT TTTGTTTTTG AAATGGAGTC TCACTCTTGT
68601 CACCCAGGCT AGAGTGCAAT GGCAAGATCT TGGCTCACTG CAACCTCCAC
68651 CTCCCAGGTT CAAGCGATTC TCCTGCCTCA GCTTCCCAAG TAGCTGGGAT
68701 TACAGGCACC TGCCCCCATG TCTGGCTAAT TTCTTTAACA ATAAAGTGAA
68751 CTTGGCTTAC TGTAATTTTT TACTGTACAA ACTTTTAAAT GTTTTAACTT
68801 TTTGACTCTT TTGTAGTAAC AGCTTAAAAC ACAAACACAT TGTACAACTA
68851 TACAACTTTT TTTTCCTTAT ATCCCTATGC TATAAGCTTT TCTTTTTCTA
68901 TTTCTAACTT TTTGTTACTT TTTAAACTTT TTGGTTAGAA AATGTTTAAA
68951 GGGTAAAGAC ACAAACTAGA GAATTTATAT CTTTAAACTT TAAATGTTTA
69001 AGAAGTAAAG ATATTAAGAC ACAAACACAT GCATTAGCCT AGGCCTACAC
69051 TGGGTCAGGA TCATCAACAT CACTGTCTTT CTTCCACCTC CACAGCTTGT
69101 CCGGCTGAAA GGTCTTCAGT GGCAATAGCA CGCATGGAGC TGTCATCACC
69151 TATAATACTG CCTTCTTCTG GAATACCTCC TGAAGGACTT GCCTGAGGCT
69201 ATTTTACAGC TACCTTTTTT TATAAGTAGA AAGAGTGCAC TGTAAAATAA
69251 CAACATATAT AGTAAATGTA TAAACCAGTT ACATAACTGC TTATTATCAA
69301 GTATTATGTA CTGTACATGA CTGTATGTGT TATACTTTTA TATACAACCA
69351 CAGCACAGTA GGTTTGTTTA AGCCAGCATC ACCACAAACA CATTAGTAAT
69401 GCATTGTGCT ACATTACTAT GGCCAAGATA TCACTAAACA ATAGGAATTT
69451 TTCAGCCCCA TTATAATCTT ATGGGACCAC CGTCATATAA GCAGGTCATT
69501 GTTAACCAAA ACATCATTAT GTGGTGCGTT ACTATATTTT GGTATAATTT
69551 ACATATAGTA AAATTCACTC CTTTTATACA GTTCTATGAA TTTTGACAAA
69601 CCTATATAGT CATTTAACCA CCATTATAAT CAATATATAA AATATTTTAA
69651 TTATCCCAAA AAGGTTTTTT AAGCACATTT ATAGGCAATT TTCTCCCCTG
69701 CAACCCCAGC CTCTGGAACC ACTGATTGT TTTCTGTTTC TATAATTTTT
69751 TTCTTTTCCA GAATGTCATC TACATGGAAT TCTGCAGGAT GTAGCCTTTG
69801 CATTCTGGCT TCTTTCACTT AGATTCATTT TGAGATCCGT TCACATTGTT
69851 GTGTGTATTA GTAGCTTGTT CCTTTTTATT GCTGAGCAAA TTTTTCATTG
69901 TATGTCTGTA CCATAATTTG TTTATTCATT CCCCAGCTGA TGAACATTTA
69951 GTCTGTATTC AATTTGGGGC ATTTATAATG AAGCTGTTAT AAATATTCAT
70001 ACATAGTTTT TTATGTGAAC ATATTGCTTA ATTTCTCTTG TGTAAATATT
70051 ATGGGGAGTG GGCTTATGGA GAATTGAGAA ATATACATTA ATGTATCTAT
70101 AATTTTTTTT CTGGGAAGAT AGTACACAGC TTTTGTCGGA TTCCCAAAAC
70151 GGGCCAGGGC TCACAAAAGG TTAGGCCCCA CTGACCTTGC TGCTTCCTCT
70201 GGTTTGTGTT GGGTTCTTTA AGCTCTGTGG TCTGGCTTTC AAGTGGAGCA
70251 TCAAACTGAG AGGCAGCCTG GCTTAGGAAA ACAGGCATTG GGTTAGGATT
70301 GAAGTGCTTC CCACCTTAGT CTAGTCTTTC ACTGTGTGCA ATTGCCAGCC
70351 TTCTTTCCCT TTCCGGGACC TTGGAAACCC TGTCCATTGG TAACCAGTTT
70401 GATGGCTAAG CTCCATTTTT CCATCATGTT TCCTAGACAA CGCCATGCAA
70451 GCTTCTGCTC CAGCCCCTTT GGAGCTCTGA TTCAGACACT AATCTCAGGC
70501 CCTCCAAGGA AGCATCATTC AGACCTTCCC TGCTTCCTGC AGAGGCACAT
70551 GTAGTACAGT ACGTGAGGCT TTCTATGGAG CTGCTCTCAT TTTTGTTCAT
70601 TAACTTCTCT CCCTGGGAGG AGGCATGCCA GGGAGGGCGT TTATCAAGAT
70651 GAGGCACATG ACAATAGGAG CACCAGATTT CCAGTCCCTG TTTTGTTATC
70701 AGAAGTTCGC TTTTCCAGACT TGGGCAAATC ACTTTAATGT CTCTTGCTTA
70751 AAACCTTGAC TAGCTTTTCA ATGTTTTTGG GGACAAGGAC TCAAGGCCTT
70801 AGAGATCTTG TGATCTCTCT ACATGTGTAA TAAATATATA AACCATAATA
70851 TAGCTGCTTA TTATCAAGTA TCATGCACTG TACATGACTG TATGTGCTAT
70901 ACTTTTATAT GCAACTGGCA GCACAGTAGG TTTCTTTAAA CCAGCATCAA
70951 CACAAACACA TTAGTAATGC ATTGTGTTAC AACATTACCA TGGCAGAGAT
```

```
71001 ATTACTAGAC AATAGGAATT TTTCAGCTCT ATTATAATCT TATGGGACCA
71051 CCATCATATA AGCAGGTCAT TGTTAACCAA AACATCATTA CATGGTACAT
71101 GACTATATTT TGGTATAATT TTATACAAAA AAAAATTGCC TGACTTTTGC
71151 CTACCTACCC AGCTCCTACT TCCTTGAGTT CACTCCTTTG TGCACTCCAA
71201 CCCCACTCAC CTATCTGTTA TCCTTCTGAC ACACCCTATT GCCTCCTTCC
71251 ATTTGGCTTT ATCCTACAAA GTTTGCTGTT TACAAAGTTT ACTCTGAAAT
71301 AGAGGTCATC ATTTTGAAGA CTAGAAAACC AAGGCACAGA GACTTACATG
71351 CCTTGCCCAA GTTTGCATAG TTTGTAAATG GAAAAGCTGG GGAAAATCCA
71401 CGGAAACTTG GCTCTGGATT CCATGCTATT GACCAACTCC TGACTTCCTG
71451 CCCTGCTAGA CCTTAGTGGG TGGTCATGAA ATAAAGGATG TAGGAACAGT
71501 GTGCCAAGAG TTCTGTTGGA TTATTTTAGC TGAAATCTCA TAATGGCTTT
71551 TTATAGAATA TTAATGACTT ACAGAGCTCT TTGCTCTGGG TTATGGACTT
71601 AGGTTTCTAA ATTGTCATCT CCTTCTAGAT AACTTTTCAG GAACTTATCA
71651 GCACCCACAC AGGACTGGAT GTGCTTTTGG AAGGTACCAT GGAGGCTGAT
71701 ATGGTGTGGC TATATCAAAT CTCATCTTGA ATTGTAGCTC CCATAACCCC
71751 CACGTGTCAA GGGAGGGACC AGGTGGGAGG TAATTAAATC ATGGGTGTGT
71801 GTTTTTCCGT GCTGTCCTCG TGACAGTGAA TAAGTCTCAT GAGATCTGAT
71851 GGTTTTATAA AGGGCAGTTC CCCTGCACAT GCTTTCTTGC CTGCCACCAT
71901 GTAAGAAGTG CCTTTGCTCT TCTACCATGA TTGTGAGGCC TCCCTAGCTG
71951 TGTGCAACTG TGAGTCTACT TAACCTCTTT TTCTTTATAA ACTACTCAGT
72001 CTTGGGTGTG CTTTTATTAG CAGCATGACA ACAGACTAGT CTAATACAGA
72051 GGCTTTGGGC ATAAGCTATG GGCCTTTGGT TTTGAGGTTC TCCAATATTC
72101 AGCTGGGAAA TTATGTACCA CTAAGATGAG TTTTGGAGAA GCCTCCTTGA
72151 GAGTAATTAA ACCAGAGCAG CAAAACAATA GACTCCTACC TGTATGGAAA
72201 GGACAGAGTC ACAAGTCAAA GCTTCAGGCT GAACCTTTCT TAGCAAAGTG
72251 AGAAGGGTAG ATCTGAGACA AAGGAGCAGG GATTTTTTTT AGGTTGATTC
72301 CTGTATTTAT GTAACTTCTT TCTCCTCAAC AGTACAGGTT TCTTCATGAT
72351 ACATGTCTTC AAGACAGCAT TGGAGTAAAG GATTCTCAGT GGCCTTGTTT
72401 TATTCAATGG CATTTAGTAA ACGTGGGGAA GGGATCAAGA GTCCACATCA
72451 GATCCTGGCC CTGGAGCAGC TTTTCTAGTC GGGGGTCATG ATAGCTACAG
72501 TCTCTCTAGT ATCTTCTCTG TGCCATTTAA ATAAATAAAT CAGAGAATTG
72551 GACTCAGAAT CTGATTCTCT GATTCCGCTG AGTCAGTTCT TGGCCAGGGT
72601 CATGAAACTG GTAACTTGTA CAGCCTGGAC CCGTACTCAA GGATGTGAGA
72651 CTTGGAGTGG GGGTTGAGAG GAGGACAGTT CATGACAAGC CTGACCCAAC
72701 ATAGTGCTGT GCCCAATTAG CTAGCTACAC AGATAAGCAA ACTGAGGCTA
72751 CCACTGGGTC AGTTCTTGGC AAGGGTCAGG AAGCTGTAAC TTGTAGAGCC
72801 TGGACAAGTG TCTGTGATGT CAAACCCCGT CCATGTAACT GCTAGTTACT
72851 ATATGGGAAC TCAAGTTTAT TACTTAACTG TATTAAGCTT CCATTTTCTC
72901 TAAGAAATGG GGGAAAAAAA GCTTTTACCT TGGCTTAAAG CAGTTGCAAG
72951 AATTAAAAAG TTAATTCATG TTGTTTATTT ATCAGAATGC CTAGCACATT
73001 ATAAGTCTCA GTATAGGAGA ATTGTATTAT TCTTACCATC ATCACCATCA
73051 CCACCATTAT TTGCCAAGAG AGAGGTATAT GCAAAGTGCT ATAGTGGTTC
73101 AAAGGAGGGG GCAATCGCTT CCACCAGGAA GACAGTGGAG GGTAGTGTGA
73151 GGATAAATGT AAAACCTGAA AATTTAAACT TGAACTTGAA AGGAGACTGT
73201 GTATGTGGGA ATTTTGGATC AAAAGGGGAT TCCAATAGAA GAAACAGCTG
73251 AGTTAAAGCA AAGCGATAGA ACACTGATAA CGACTATGAA TGGTGAATAG
73301 AGCATTTTGG CTGATTGCTG TGTACCTAAA TGGAGATGAG GGTGGAAAGA
73351 TGCATTGGGG GGTAAGACTT TGAGAACCAA GTTCATTTGA GAACCAAGTT
73401 CATTTGAGAA CAACTACGAA TGGTGAATAG AGCATTTTGG CTGATTGCTG
73451 TGTACCTAAA TGGAGGTGAG GGTGGAAAGA TGCATTGGGG GATAACTATG
73501 AGAACCAAGT TAAGGGAAGT GTCATGAGCA GAGCTATGCC CCAAAAAGAT
73551 TTAGCAGGCC ATCTATACCC ATTATGTCTG GGGTGCATAT GAGGGAGTTA
73601 CAGGATGTGA GACTTGGAGT GGGGGTGGAG GGAGGGCAGT TCATGACAAG
73651 CCTGACCCAA CACACTGTTG TGTCCAATTA GCACGACCTA TTTTGGCTTT
73701 GAATGGGGAA GGAGAATCTG TGACCTCTGA GTCAGCCTTT ATGGAATGCT
73751 CAAGACTTAA CAGGTCTTGC AAGATGCATT CTCTATCAGT CATAGTACTT
73801 TAATAATGGT TCCTTACTCA GCTTCATTCA TTCATTGGAA ATTCATGCAT
73851 GTCTTTGTAG TCCATAGGAT TCTCAGAATA ACCTTGTGAC TAGACGAGAG
73901 AAATATTGAC TGTGCGATTA CTGAAGGCAA AGACTGTTTG TGATGCTTGA
73951 TTACTTGATT TTTGCATATC CAACAAGTGA ATGAGTGAGT AAGTGAGTGA
74001 GTGAGTGAAT GATTGAATCT CCACTTGACT CCTGAGGCAA CTGAGATGAG
74051 GAGATATTAA AATATCTCAA GGTGTCATTA TTGGACACAC ATATGACTAG
74101 GACTTTTGTT ACTTTCATAC TTCTCCATTT ACAATTTCTT AAAAGAGTAC
74151 TTTCCAAAGT ATATACAATT TAATGATTTG AAATCCTGCT TGCGGCCAGG
74201 CACGGTGGCT CATGCCTGTA ATCCCAGCAC TTTGGGAGGC TGAGGCGTGT
74251 GGATCACGAG ATCAAGAGAT TGAGACCATC CCGGCCAACA TGGTGAAACC
74301 CCGTCTCTAC TAAAAATAGA AAAATTAGCT GGGCATGGTG GCAGGTGCCT
74351 GTAATCCCAG CTACTTGGGA GGCTGAGGCA GAAGAATCAC TTGAACCTGG
74401 GAGGCAGAGG TTGTAGTGAG CCAAAGACTG TGCCACTGCA CCCCAGATTG
74451 GCGACAGAGC GAGACTCTGT CTCAAAAAAA AAAAAAAAA CCTTCTTGCT
74501 TTTGTTGCTG TTTTCTTCCT AAAAGTGGAG CTTTGCCTTT TCCCTTTTAA
```

```
74551  GTCAGTCACT  GAGACAGTAT  TTGGTTTTGT  GCCCTCTGAG  AGTTATTTTC
74601  CAGCCCACGA  GCCCCACGTT  CTGATTCTGA  TGTGAGATAA  TGGAGCTTAG
74651  CCCTCAGAGA  TATGGAAGAC  ACCAATTGTT  TCGTTCTCTA  AGTGTTCAGA
74701  AACAACTGTT  CTTTTCTTTT  CTTCCTTTTT  TACTTCCCCT  TACAAGACTT
74751  TCTTTTCTTT  GCCTCAAAGA  GGGTAAAGGA  TGGAAGATAG  AAGGAGGAAC
74801  TCAGGTTAGT  CTATGGCTCA  GAGGCCTTGA  ATAGTTTGGG  AAAAAAATTA
74851  AACAACATGA  AACTATAACT  TCTCATTGTT  CTCTGCTGCT  TCCACCTCCC
74901  ACTGACAGTG  TATGCTTTCC  ATCAAATATG  TGTAATATTG  GTTGTGGAGC
74951  AGATCAAAAA  CATCTATTTT  CTCTGGAATG  TACAGTCAGT  CAATCTTGAA
75001  GAAGGAGCAT  CGTATCAAAG  AGGTCTGTTG  TCAAATACCT  ACTTCCCCCT
75051  TTCTGTCCTT  TCTCTTCCCC  TTCAAGGGAA  ACAAATGTCT  GGGTTGCAGA
75101  AAGGCCCTTT  CATCTCAAAT  TGTTCTCTTT  TCATTAGTGT  CTTGGTTTGG
75151  GCAGGGGGTA  TGGAGGCAGT  CTACTATGAG  TAGTATTGTT  GAGGACATGA
75201  AATGTTAAAT  AATAAGATTT  TACATTTGTA  AAGTGCCATG  TTCCTTGCTT
75251  TTACAGACAG  AAACTTAGGC  TGCTGGGTTT  TGAACAATTA  AGTTGAGGAG
75301  CTATTTGGGA  TATGTTGTAT  AAATCATAAC  CGCTTGTTGA  AGGGTGTGCT
75351  GAAATCAAGG  TGTGACCTCT  GCACAATTCA  GGGACCTCCT  CTTGGGCAAG
75401  TCTAGAGTCC  CAGCCTTGCC  AATGCTTCAG  AAATGATTAG  ATTCAAGGTG
75451  CCAACATCAG  GCCAACTGAA  CCCTTGAGAG  ATTGCCCTAT  AAACTGTTAT
75501  TGGAGCAGCA  TCTGTTTGCC  AGGGTAAATA  TTCAGTCATA  TGGACTGGGC
75551  CCTGGAGTCT  TCAGATGGTG  CAGCCCTTCC  CAGAGGGAAG  ACTTCATGGG
75601  GGTCCAAATG  CTGGTAAGAA  GTTTTTGTTT  GTCTGTGTCT  GCCATCACAG
75651  CATAGAGATT  AAGAACCTGG  TATTTGGAAT  CAGACAGATT  TTTGTGTATT
75701  ATTTACCTGT  TGCTGCATAA  CAAATTGCCC  CCAAACTCGG  TGACTTTCTA
75751  CAACAATCTT  TGTTTATTAT  CTCTTATGGA  TCCCTGGGCC  AAGAATTCAC
75801  ATGGAGCACA  ATGGAGAAGG  ATGGAAGACC  TGAAAACTAA  ACTGAAATCA
75851  TCTAAAGACT  TATTTACTCA  TGTGAGCTGT  GTTGGAGCTG  TCAGCTGCAA
75901  CACTTACACA  AGGCCTCTGC  ATTGGGCCTG  AACTTCCTCA  CAACATGGTG
75951  ACTGGGTCTT  AAGGATTGGC  CTAGATAAAG  TCATCGGCAGA  GACCACTCAT
76001  GGAAAGCTAT  GTCAACAATG  GAAGATGAAT  GGCCAGGATG  AAGACAGAGA
76051  GAGAGAGAGT  AAAGAATTCC  AAAGGTTGCC  ATGTTTGTCT  AACCCTGCTT
76101  CACAGAACCA  ACAGACAAAA  TCTGTAGCCT  CCTCTCCTTG  TCAGATCTGT
76151  GTATTTTGTA  TGGGAATGAA  TATGTCAGAA  AGTAGTAGCT  TAGTGATAAA
76201  TTATGCAACA  GCCTCTTCTT  CATTCTAGGT  TCACCAGTAC  TGCCAAATTA
76251  ACATTACCTG  AGCACCTCCT  TTGCCCAAGA  ATTTTTACAA  GTGTAATTTC
76301  ATTTAATTCT  CACAACAACC  CAAAGTTATA  ATTTTAATTT  TCCCCCCTTT
76351  GGATTAGAAC  TTAGAGGATA  TGGAAACCTC  TCAGTCACCC  ATATATGTAA
76401  ACTACTGCTA  AAAAGGTTTA  TTTTAAAGAA  GTGGAGCTGT  TATTTACTCT
76451  CATACATTCA  CCTATTTTAG  TTTCAGGGAG  TACTTCTATG  GCGGACTTAT
76501  GTAATACCTG  TGATCGTATA  AGAAAGTCTT  TTGGTTCAGG  TATTCTTATC
76551  ACATTATCTA  ACATATCTGT  GAGACTTACC  TTTGATCTCC  CATGTCGTTA
76601  TACTTCCAAA  GCCACCTTCA  ACTAAAATCT  ACACTAAACA  AAGAAAAGTG
76651  CTTCAATAAA  TCTGTGTTTC  TAAGCAATTG  TCACCTTTCC  CAAAAAAGTA
76701  AAATAGCAAT  TTCTATAGCT  GTTTTTTCTT  TTAATGGCTT  TATTGAGATG
76751  TGTCACATAC  CATATCATTC  ACCCATTTAA  AGTGTTCAGT  TCAGTATTTT
76801  TTAGTATATT  CACAGATATA  TACATTCATC  GCCATAATCT  AATTTTAAAA
76851  CATTTCTCTC  TTGCAAAAGT  AGCCCAGTAC  CCATTAGCTG  TCATTCCCCA
76901  GCACCCTCCC  ACCATCAGGT  TCTAAGCAAC  CATGAATCTA  CCTTCTATTT
76951  CTGTAGATTT  GCCTATTCTG  ACCATTTTCT  ATATATGAAA  TCATACTATT
77001  TGTGGTCCTT  TGTGACTGGC  CTCTTTCACT  TAGCATAATG  TTTTCAAGGT
77051  TCATTCATGT  CTTAGCATGT  ATCAGTGCTT  CATCCCTTTA  TGGGTATATCC
77101  ATAAAATGAA  ATATTATAGG  ACTATAGTAT  TTCATTTTAT  GGATATACCA
77151  TATTTTGTTT  ATCCATTTAT  TAGTTGATAG  ACATTTGAGT  TGTTTTTACT
77201  TTTTGACTAC  TATGACTAAT  GCTGCTATGG  AAATTCTTTT  ACAAGTTGTC
77251  ATGTGGCCAT  ATGTTTTCAT  TTTTCTTGAG  TGTGTACCTA  GTGGTGAAAT
77301  TGCTGTGTTA  TGTAGTAACT  CTATGTTTAG  CCTTTTGAGG  AACTGCCAAA
77351  CTGTTTTCCA  AAGTGATTGC  ACCAGTTTAC  ATTCTCACCA  GCAATATATG
77401  AGGGTTTCAA  TTTCTCCACA  TCCTTACCAA  CACTTGTTAT  TGTCTGTCTT
77451  TTTCATTATA  GTCATTCTGT  GGGTATGAAG  TGGTATCTCA  TTGTGGTTTT
77501  GATTTACATT  TTGTAACGAC  TGATGGGTGT  TGAACATCTT  TTTTATTTCC
77551  TATTGGTTAT  TTTGTATATC  TTCTTTGGAG  AAATAGCTCT  CCAATTCCCT
77601  GCCTTTTTTT  TTTTTTTTTT  TTTTTCCAG  AGACAGAGTC  TCACTCTTGT
77651  CACCCAGGCT  GCAGTGGAGT  GGTGCGATCT  TGGCTCACTG  CAACCTCCGC
77701  CTCCTGGGTT  CAAGCGATTC  CCTTGCCTTA  GACTCCCAAG  TAGCTGGGAT
77751  TACAGGCATC  CACCATGCCA  AGCTAATTTT  TTTGCATTTT  TAGTAGAGAT
77801  GGGGTTTCAC  CATGTTGGCC  AGGTTGGTCT  CGAACTCCTG  ACCTCAGGTG
77851  ATCTGCCTGC  CTCGACCTCC  CAAAGTGCTG  GGATTACAGA  TGTGAACCAC
77901  CATGCCCAGC  CTCTTGTCCA  TTTTTTAATT  TGGTTGTTTG  TCTTATATTA
77951  TTGAATTGTA  AGAATGTTTT  AACGTATTCT  AGTTATAAGC  TGCTTATCAG
78001  ATATACATTT  GCAAATATTG  TCTTTTTTTT  TTTTTTTTTT  TTTGAGACGG
78051  AGTTTTGCTC  TTGTCGCCCA  GGTTGGAGTG  CAATGGCACA  ATCTCGGCTC
```

FIGURE 3, page 22 of 122

```
78101 ACTGCAACCT CCGCCTCCTG GGTTCAAGCG ATTCTCCTGC CTCAGCCTCC
78151 TGAGTAGCTG GGATTACAGG TGTGCACCAC CACGCCCAGC TAATTTTTGT
78201 ATTTTTGATA GAGACGGGGC TTCACCATAT TGGCCAGGCT GGTCTCAAAC
78251 TCCTGACCTC GGGTGATCCA CCCGCCTCGG CCTCCCAAAG TGCTGGGATT
78301 ACAGGCATGA GCCACCGTGC CTGGCCACAA ATATTGTCTT TTATTCTATG
78351 GGTTACCTAT TAGCCTTCTT TATGGTATCA TTTGCAGCAC AGTTTTAGAT
78401 CTTTTTTGTT GTTGTTGTTT AGCTTGTTTA TTTGTTTCAT TTTATGTGCA
78451 GTACTCACTT CTGCTTTCAT TCATTTATGC CTTGAGTGTC CATTATGTGT
78501 CAGGAACTTT TCTAGACACT GGTGATATGT CAGTGAATAG GATAGAACAA
78551 TGTCCTTGCT CTCCTGAAAC TAATATTCCA CTCAAGAAAG GCAGATGATA
78601 AACAAATAAA TCAAAGATTT CAGACAATGA TAAATATGTT TAAGAAAATG
78651 AAGTGAGATA ATGAAGTGGA AAATTTTTAT GAGGCGTGTG TCCAGGGTGG
78701 GGAGGCAGCT TTAGGTAGAT TCACACTGTT GGCATTTGGG GCCAGATAAT
78751 TCTTTGTTGT GTTGTAGCTG TCCTGTGCAA ATATCCTACA ATGCAAGGAC
78801 AGCTGCCTGT GTAAGGATAT CTGTAGCAGG ATCTCTGACC TCTACCCACT
78851 AGGTACCATT AGTACCTCCC TCACTTGCTA TAATCGTACA AAATATCTAC
78901 AGACACTGCC AAATGTTCCT CAGAGAGAAA AATCACTCTC AATTGAGAAC
78951 CACTCAGATT AATAGTTGAG AAAGGCATCT CCGAGTGATG ACCTGAAGAC
79001 AGAGTCCACC TTATGGGAAG CAGTGGAGCA AAAGCATTCA AGATAGATGG
79051 TAAATAAGTG CAGAAGCAAG GTGGGGATGC ACTTGATGTG TTTGAGAATA
79101 GAAACAAGGC TTTAGAGTGA CAGTGTGGTG AATAAGGGAA AGAATAGTAG
79151 GAGATAAAAA TAGAGAGGTA GGCTGGGGTC AGATTATGAA GGATCTAGTA
79201 GACAGTAATA AGAAATTTGG AATTATTCCG AGTACAGTAT AATTGGAAGC
79251 CAGTAAGTCA GGGATAAATG GGTGCTCTCA AATATAGGAA ATAAGCTGTA
79301 GATTTGGGGT TTTGTCCCAC TTTATTTTAT TTTGAGTTTT TGTGGGTTTT
79351 TGTTGTTGTT TTTGCTCAAG GATCCACAAT CAGAGAGTGA TAGAGCTAGG
79401 ACTAAAACCC AAGTCTCCAG GCTAGTAAGC TATAGGTCTT TCTATTAAAC
79451 ACGGGTGACG AAGCAGTCTA CATTTATTAA CTGTAGGATT GCAATTGGCC
79501 GTTACTCTAA CTGACCTTTC CCTGAATCCA CCTTGTTTAA GAATTCCTAA
79551 TATAGTACTT AGCATTTGGC ATGAAAATCA AAGAAGATGA ACTTTAGCAA
79601 GAAGCTAATC CAAATCTGCT TCACAGACCA GCAGCATCAG CATCACCTGG
79651 AAACTTGTTA GAAATGCAGA ATCTCAGGCC CACCTCAAAC CTACTGAATT
79701 AAAATCTGTG CCTTGATAGT CCCTAGTTAA TTAGTATGCA TGTTAAAGCT
79751 TGAGAAGCAC TGATCTAGTT TATCAAAATA TCATCAGAAA CAGTCGAGTG
79801 ATTCAAATGG TTTTTTTTAA TGGGCTTTTA CTGAGTCAGA AGACTAATGA
79851 TGGTGTCATC ATTAAGCTCT CATTATAACA TCTTTTTTAT TCCTTTCTTT
79901 CTTTGGCTCA CAGCAATTCT TCACTCACAA AGTCCTATGT AGTCTTCCTT
79951 AATAACAGCA TACATTCTTT CCTTTCATTT CTGCAGCCAC CACCTTTGTC
80001 TTTACCCTCA CTAATTTGTA CCTAGCTTAT TATAGCCATA TCAAAATTTA
80051 TGCCTTCCTC CCTTCATGCC CTTCATTGCC TAGAGCTCTC CGAATCTCAA
80101 ACTTCATATG GCTTTTTCTT GTCTTCAGAG TAAAATTCAC ATTTCCAACT
80151 CTGACTTTGA AGGCCTTCTA TATCAAAACT CCAAACACGT TTCCCAGAGA
80201 ATCTGTTGTG TGTATGTCTT TAAGTCCATG TCTTTGTTCA CACCCTGGAA
80251 TGCCCTTTCC CATCCTTTCT ACTGCCTTCA AGGCTCTGCT GAAATCCCAC
80301 TTCCATCAGT GATGTCAAAT CTACCCAGTT GCCTACCCAG GTTCTACGGC
80351 ACTTGTTGCC TGTACCAATT ATTTTTTGGT GGGGGGGTCT GATAGCATTA
80401 TAATTTCAGG CACAAGCACA GGTCTTCATA ACTAAATTGT AGTTCATGGA
80451 GAACAGAGGC CACATCTTTG TCTGCTCCCA CTCTAATGCT TAGTAAGGCA
80501 CTAAGCATGT AGTAGGTAAT CAGTAAATAT TTTGCCTTTG AATCTGAAGT
80551 TGTGGAGTAA TGCCCAGATT TACAAGCACT TCGTTTCTAC TAATTTATTT
80601 TCTCTAAGGG TCTATGCTAC AGTTCAGCAA TTGTGTAAAC AGCATTGTTT
80651 ATAAAGCCAG CCATGGGTAA GCAGTCTCAG ATCAGCTGGG TGGTAGGCAA
80701 TGGATGCAGT CCAGAATTTC AGGCCAAATA AAATTGTGAA TCTTTATTTC
80751 AAGAACCACT GTATTCTGTG GGACCAAGCT CTGTTCCGGG TGTCAGAACA
80801 ATAGGTATCC CTCCCTGCTG CTGAGCAGCT GTATGGGGCA AAAAGCCCCG
80851 ATTGAGCCTG GCCCGCCTGA ACCTGGGATA GCCCAGATAT AAAATGATAA
80901 TAACATTGAC CTGAATTCTG TATTTTGTTA CATTTTTGTG TTTGCTTAGT
80951 ACTTCTTTCT TAAGGTTGTT GGCAAGAGCA TCTGCTGGTA ACTTGGCTCA
81001 GTGTGTTGTA GGTTTTTGTA TATGGTTTGG GTTTCCTATT CCTGGGCATT
81051 GAACTATTAA GATTCCTGCA GATAGGCATA ACTACTTACA GCCTTTTCTG
81101 TGTATATATT AGCTCTTACG GACCTCATAA ACCTAAAGAG GTGCAGAGGA
81151 AAAGTGCCAT CATTCTCATT TTACAACTGG GGAAGCAGAG GCCCAGAAAA
81201 GTGATCTAAC TTTCCCAAGT TCACAAATGT GTTATTAGAG CTGCAACCAG
81251 AGCTAAGGTT GAGGCTTTAT GAACCTTAGG TTACTATTCG GTTAATAGGC
81301 TCAGTGCAGC CTTACCTTAC TAATTATTAA AAATAGACAA CATTAGGATT
81351 TAAACCAGAT GGTCTTTTCC TGTTGTTCAC ACTCTTACCC ACTGTCAGCA
81401 ATGGCCCATC AGATAATCCA CACTGATTCA TGAAAAGGCA AATATTTTCT
81451 GTTTCTGTTC TAAGCTAGGC TTGCCAAAAC CGAGAGCAAT ATTCTCTATC
81501 CCCGAGATGC ATTGCTTCAA GCACCTATCT ACTTTCTCTG CAAAGTTATC
81551 CCTTTGGCAA TGGTTCTTCA ATTCTGATTA TATCTGGGAG AGAAATAATA
81601 AACCTATTTA GATGCTAATT GGCTTTAACA TCTCAGTGAG TCAACAGGCT
```

FIGURE 3, page 23 of 122

```
81651 CATGTATGTC CTACAAGAAG TCTCTCAAAC CTGGATCATA CAGCTATCAA
81701 ACAGTGTTGC TCAGCCACCA ACTTCAAAAT GGCTCAATCC ATTTGAGTTT
81751 ACAAAGCATT CCATTTTATA GCAAAGGACA TCTGTGCTAA GGATAGTGTC
81801 TTAAAGGCTA GGCTTTTGAG GTGGCAATTA TTTTCTTGCT GAGGTTTCAG
81851 AATAGACAAT TTTTTTTCCT ACATTAAAAC AGAGAAATGA AGAGTCTGAG
81901 TATTCTAGGA AGTTCATGGC ATAATGGTAA GCAGATAAAT TTCTGATATC
81951 CTTCTGAAAA TTAACTTAGT AGCTTTGTGA CCTCTGGCGC CTTATCTTCT
82001 CCAAGCCTCG GTTTTCTCAT CTGTAAAATG GAAGTCATAA TGGTACTTAC
82051 AAGGCCAAAA TGATGACTAA ATGAGAGGAT AAATTTAAAA TATTTAGCTC
82101 AATGCCTGGC ACATAGTAAG TGCTTCATAA CAATTGAGTA CTAGTATTAC
82151 TATTATTTAT TAATAATTCC TATAGTCAAA TAGAATAAGG AGTCCCCCTT
82201 GTTCACTATA GATATTCAGA ATGTCCTTCT CTCAGGCCTG AATGAGTAAT
82251 TCCTTCTGGA TTACTAATAT CAAAAGTCCA TTTGTATCTG ATTGAGATGA
82301 GGAAAGAAAT GCAGGATGGA GCAGGGAACC AGTCCTCACA CTACATGGTT
82351 TACTCCAGCG ATTCTCAACG TTAGCACTAC CTATGTTTTG CACAGGGTTA
82401 GTCTTTGTTT TGGGGGGCTG TCCTGCACAA TGGAGGATGT TCATCAGTAT
82451 CCTTGGCCTC TATCCATTAT AAGATGCCAG CAGCAAACCA ACCTCCTCCA
82501 AGTTCTGATG ACCAAAACTA TATCCAGATA TTTGCCGACT GGGGGCACTT
82551 GCCCCCAGTT GAGAGTCACT AATTACACAG TACATTTGTC CATGATGGGG
82601 ACATGTAGGC TCACGGGGTA GCCAGTGACA GGCAGGCAGA CAGGAGTGGG
82651 GAATTTTTTT TCTGTAAAGG CCCCAAGTAG CAAATATTTT AGGCACTGTC
82701 TGTCCCAACT ACTAAACTCT GCCATGTAGC TTGAAAGCAG CCAAAGACAA
82751 CACATAAATG AACATGTTCC AGCAAAACTA TTTATGGGCC CTGAAATTTG
82801 AATTTCATAT AATTTTCATG TGTCACTAAG TAATCTTTTT AAAATTTTTA
82851 TTCAACCACC TAAAAATGTT AAAACTATAC ATGAGTCGTA CAAAATCAGG
82901 TGGTGGGCTA GACTTGGCCC ATGAGCCATA GTTTTCTGAC CTTTGGACTA
82951 AGAAATACAT GAAGCCGTAA CTTCATATTT ATCCCTAAGA TAAACATGGG
83001 ATAAATATGA TACTTCTCCT AACACCATCA AATTTACATA TAAATTTTAG
83051 AGAAAGCATA TTATTTTATT AAAATGAGCA TTGCTATATT TTGGAATAGG
83101 ACCCAAGCCA AAATGAATTT TAGAGATAAA ACATTATATT CCAAAGTTAT
83151 ATCTTGCTTC CCATGGGCTG TTGACCCATG CCTCAGGTCC CCAGAGGCCT
83201 TCATTTCCTG CCTTCATTTT CCCTTGCTTT TAGGCTACCT TGGTAGGAAA
83251 ACTTAAGAAG TTGCCATGCC ATTTTAAGTG AGAAACTAAG TCATATAAGA
83301 GCCTTTTAGA CTTCCCATAA CTGGTTACCC TTAGATAGTG TCCAATAAGG
83351 CACCTCAAAA TATTCTAAGT GCTCTAGTGG TTGTCTAATA TATTTCATCA
83401 GAGAATGGTT GTGTAATATA CGATTGTTTA ATCCAAGGTG GCTCCTATAA
83451 ATCCTTTTTG AAATGTTCAA GTATCTCTGT CACACACTTG GGGTATGAGG
83501 TTTATTCACT TCCATTGTCA ACTAAGCAGC ATGTGTACCC CACAGCTTGA
83551 TGAGTACCCA GAAAATCAGC AAATGGTGTG GGCCCTACTC TCAGGAAGCT
83601 GGAATCTGAT GGTGATATTA GGACCTGCTC ATATGAGATG ACCCGCAAAG
83651 AGTACACCAT CAAGAAAGGT GTTGTGGCAG AAGGAGAAGT GGAGTGGCAA
83701 GCGGGAGGCA CATTTTCTAG CACCTCCTGT GCATTCATCC TGAAGGAGAG
83751 AGTTACTTTA CCTTTAGATA AGTTTTTCTC TTCTGCCCAG AGTGCTTTTT
83801 TGAGACAGAT TCTGAGACAT CATCCAAGTT CAGCTGGGAA GAATGCCACA
83851 ATTGATTAGA GCTGTCAGCC GTGGATGGGA GATCAGGGAT TGGCTGGCAA
83901 AAGTGCCAGG GTGTTGACAG GCATAGTCTC AGTCATCTCC ACAGTTCTTC
83951 CTGGCTGGAA ATGCCTCTGG CTATATTACC CTTATTGCAT GATTTCATGG
84001 TACTGATCAG ATCCAAAGAA GGAGGATGAT TGTGAGATGC AAAGCTCAGG
84051 GGACGACTAC GCGGTGAAGG TGAGAGAATG CCCAGAGCTT TGAAGAGGCT
84101 GCTTCTTCTT CAAAGCTGTG TTCCAGCAGA GCACATTTTG TGCATACTTG
84151 AATTTTGGTT GGCTCTAGGC TGAGCGCATT CTATTGTGGC GTTGGCATGG
84201 GAAGAGGGAG GCATGCGAGA AATATTGCAT CTCTGCTATT CTCCTGGGCC
84251 CTTGTGAATG GGAATGTCTT CTTAATGAGC CTATCCCAGA GAGTCTGGCC
84301 TTTCAGATAA ACAAATAAGC ATCAGCAGGA GATGCTCACA AAAGGACTGG
84351 GCAAAATAGG GCCACGTTGA GTGACAACCC AAATAAAGGA GTCCTAAGAG
84401 GTCTGAAGCT GGTGGCTAAT GAGCACATCT CCTCATTTGT GATTTCTTGG
84451 CCAGGACATG TATTGTTGAG GGTGCCAGGA AAGTCTGTCT TATTTTATAC
84501 AGGAAGAAGC CTTTCTGGCC TTTGTCCTGG TACTGGCTTT TATATTTTAT
84551 GTTGGGCTAG GGGCCTGCCT GGAGGACATT TACAAGGTGA GGAGAAATCT
84601 CAAGCTGATT TTAACCTAAC ACAATTTTCT TATCTTTCTA GTGATATATA
84651 TCAGTTTTCT CACTTGGGAA ATGGGAATAA AAATACAACT CACCTACTAG
84701 AATTGTTGGG ATGATTAAGT CGGATGATTC TCAGAAAGCA CTTCCCACAG
84751 TTTCCAATAT GTAGTCAGCA TCTGATACAT GTTGGCTGCA ATCATTATTA
84801 GTAACAGTAT TATCATCATC ATTTTCATAT GTGGAAAGAT ACCAAAAGGA
84851 GTGTCCAGGG GTGAGGGATC TAGTTCCAAT TCTGCTACCA GCTGGCTGTG
84901 AGATTTTAGG CAAGTCATCT CTCATGTCAA CTGAGAGTGC TGGACGGGAG
84951 TTTTTATTCA TTTTGTAAAC ATATTGGAG GACCTACTAA GTGCCAGGCT
85001 CTATTTCCAG GGAGCAAATA TATAAAGGTG AATAAGCACA ATTTTCTGTA
85051 CTCAAGAGAT CCCAAAGGTA ATGGAGGAGA CAGGTAACAC ATGTGACCAC
85101 ATAGCATGAG AATTGCTCTT ACTGTGTGGC TGCATGCCAA ATGCTCGTGA
85151 GGCCTGGCAC GGAATTAGCA AGACTAAAGG CTCTGTCCCA GTCCAACCTT
```

```
85201 CTGTGAGTCT ATAACTGAAG CATCCAAAGT ATAAGCTGGG TGATTAGGGG
85251 AAGAAGAAGT CACCTAGCTG GCAAGGGGCC TAAAACTCAA GTCCCCTCCT
85301 TCTAGGACCA GAGTACTCAC CAACTACCAA GCTGCCTTAA AATAAAAACA
85351 TTCAAGAACA AGTGATGTGC AGAGAGGCAA CACAGTGATA AGTAACTGGG
85401 GTCTGGAAAT GGGAGACTTC AACTTCAATT TCAGCACTGT TATTTTGGTA
85451 GTTTAATGAT TTAGAGTCAG TTGTTTAATC TCTTAGAGAC TCAGTTACTT
85501 CATCAGCAAG GGTGTTACTA TAGTAATACC TGCTAGACAT TATTATTATA
85551 TGGAGAGAGA GAGCTTGGTA AGCTGTGACA TATACATTCT AGTTGGTGGT
85601 TGTTTCTGTT GTTATTATTA ATAGTAACAA CAATAAATAT CCTGTTGTTT
85651 ATTTTTTTGA AGTGTTCAGT GGCTGGTAAC TGAATTAGAG TGCCTGGAGA
85701 TATAGGTAAG GGTTTTTGT TTTAATAATC ATTATCTTTG TTCAAGAGAA
85751 TAGGAAAAAT ATAAGCCTCT TTTTAACTTT AATGCAAAAA AGTCTTTATA
85801 GCTTGTGTGT GAAAAACAAG AGGAAGGGAG GAAGGGGAGG AAAGAGATTG
85851 TCTATTTCTA CTTAAAGCTA ATTAGAGAAG TAATTTTAGG TAAGAGTATT
85901 ATGACCTGAT TTCTGATTAA TTTAAGTATT ATTATACTGT TGTAATAGAA
85951 ATCCCTGAAG TGCTTTATTG ATTATCTGTT GGTAGAATGA AAGGGTAAGC
86001 AGCTGTAGTA AATAAAATTT TTGTCTGAGG CAAAGCAAAG GAGAAGTAAT
86051 ATAGGAGAAA TTATTATAAT AAAGATGGGA GTGAGAGAAG AAACCTGGGT
86101 TCTAGTTCTT TCAGATAGGT GACCTTGAAC AAATCTCTTC CCTATACTTG
86151 GCCTCGGTTT CCCCATCGGA ACAACCTAGG GCATACTCTA GATAATCCCT
86201 AAGGTCCCTT TCAGCCTTGA CAAACTATGA GATTTCTACC TGTACAATAC
86251 TGAAACAGTG ATTAAGAGGG AGAGACACCC ACAAAGAAAG AAATAGTTTG
86301 TGCTGTGCTC AAATGCCTGA CTGATAAAAA AGAGAACAGA CTCATAAAAC
86351 CCACTAATTC AAATTAAATG GATAATTCTT GTTGATTTTG AGCTGGCAAT
86401 CTCAGGCTTC TAAATCACAA GGAAACTCCA TTTGATCCTG CAATGGTCTC
86451 TTGGTCTCTT TCTTAGCTCA GTAGTGCTAA GCACAGAGGT TTCATGGAAA
86501 TCAAGAGAGA AAGAGAGAGA GAGAGAGAGA GAGAGAGAGA GCTGTTTAAA
86551 AAAAGAAGAA CAATATACTT GGATGAACTA AAGAGTGGTC CTCATGAAAG
86601 CCTCATAATG TCCATTGCCT ACCTGTTTAA CCCTTTGTGG CCTGATTTTT
86651 GGTCCTCAAC TGAAATCAAA TTAGGTAGTC TTATGTAGGG AAATGAATAA
86701 CTTGTACACT GTTGTTGTTT GCCATCTTTA GGACCACCAA AGGGTAACGA
86751 ATTCAGCAGA CCCACAATCC GGCACTTCAG GTTTTTGAAA TTTACTCATG
86801 AAAATTTAGG AAGTCCTAAA GGCTGTGAAA AATCATTGAA CTTCATTGGC
86851 AGGCAGGACC TTGCTTTCAA AACTCTATGA GGCTACAAAT CAGAGATTGA
86901 AACCTAAAGA GGGAACAGGG CTTTCCCAGA GTCACCTGCC TTCCCAGGCA
86951 GAACTGGGAC TCGAAGTCAC AGCTAGACTA GAACTCCACT GATTCCAAAT
87001 CCAGTATAAC CAAGTCTCCT GTGGCCTTTC CCATGATCTG GACCCAAAGA
87051 CTTTCTGATG TTCCCCAAAA GAGTTGTAGG TGCACTCTGT TCTCTGGTTC
87101 TTTGCAGTGT AATGGCAGAA CTGAGGTTAG AATTCTCCTT GGATGTAAGG
87151 ATCACCAGCC CACCAGGCTG GCAGTTAGAC AAGGGAGTGA TGGATTTGGG
87201 ATGCTTTGTG TGACCTTGTA TACAACAGGT TCTTAGACAC AACCCTAGGA
87251 CATGGAAAAG AATTACATTC ATCCTGAGCC CCAGCTACTG TTACCAATTC
87301 AAATTAGGAC AACATATTGA TTAAGATACA GGTAGTTATG CTACCCTAAG
87351 AACTGGAATC TGAATACCTA CTTTTTATTT CTACTTCTAC CGCTTGTTAG
87401 TAACCTATTC TTGATCCACC ATTTAACTTC TGTGAGCCTC AGTTTCTCCA
87451 TCTTTAAGAC AGTGATGATA ATGACAGTAT CTGTAGAACA GCTTAACTTG
87501 AACTAAATGA GAAAAACTAA ACAAACACA TAGAATTAAG TATGAATTTC
87551 TGAGGTTAGT TTATACATGT TTTAAGAGCT TAGAGAAAAG GAAAAAACAT
87601 AAGTATCCTA AGGAGATTAG GAAATGTTTC CTTGGGGAGG TTGGAAAGCA
87651 GCTAAGCCTT GAAGAATAGG ATGTATTTTG AACACTGGGA GAAGAGATGA
87701 GAAGGTAGTG AAGTGGAGGC AATAGCCTGC ACTATCCAGA GACAGTTTCT
87751 GATTGTCCTA ATGCTATGGG CTCTCTACTT CAGTTTAAGA AATATTCCAA
87801 TCTTTGATAC CTTCATTCAA CAGTCCTTTC TATTTTTCTA ATTTCATTTC
87851 CTGAATTGTT TCCCTGCGGA GGAGTGGGCC TACTTGTTGA AATAAATCAC
87901 ATCACAGATA CCTCTTTTCT TCTCTTTTGT TAAAAGTTCT GTTAAAATAT
87951 ATATATTGTT AAAAAATTAA AGGTTATCTC CAGATAATTC CCCAAATGAG
88001 TAGGCTTAGG CTTTAATCAT ATTATGTTCC CTTCCTTCTT GCTCTTCACT
88051 TGCCAAGTTA TACTAATGAT CATAATCTCT TCTATGTGTT TTGGACTTTA
88101 CAGTGTGTGA AGGTTTTATT GCCACTGTTG GCCCTCTCAG TGAGCTGATG
88151 CAATAATTTA GGTTATAATT GTTGGACTCT TTATACGAAT GAGTTGCTAG
88201 AGCTTTAGAG ATGTTGCCTG ACACGTAGCA GGCTCTCAAT AAATATTGGA
88251 TGGATGGATG GATGGATGGA TGGATGGATG GATGGATGGA TGGATGGATG
88301 GTCCTCTCCC CCCTCGCTTT CTTGTGTGTT GGTGCCCGCC TCGCCGTTTG
88351 TGCGGTGTCC GTTGGTTCCG GCTCCTCTCT TTCGTTCTTC GTTNGTTTCG
88401 TCCTCTCTTC TTCGTGCGTG CCTTCTCTTC CCTCGCCTCT CGTCCGTTGT
88451 CTCTTTCTCG CGTCTCGCTC TTCTCTTCGT CGCATCTGGG TTCGCTGTCC
88501 CCTTGTGCGG TACCGTCTCT GTTCCTTGCC TCTTTCGTTT GTCTCGAGCG
88551 TCNCTCATTG CGCCGTCCTT CCTAGCCATC GATATCGTTC GTCTGGTTCT
88601 CGCGTCCTCT CGTGTCCTCT CTCGTGTCGT CGCGCATCAG ATCTCGTGCG
88651 CGCCCCCTCG CCGCTTTTCT CTCTTGTCTG CTCACGCGAT TGCGTTGCGC
88701 TCGCTTTCCC GCCCGTTGCC GTTCGCGCTC CGTCCTCTTG CCCCATGCCT
```

FIGURE 3, page 25 of 122

```
88751 CCCCCCAGAT AAATCANNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
88801 NNNNNNNNNN NNNNNNTAAC TCCAGCTTCA GCAGAGATCC CAAGGCACAG
88851 AAAGCAGGCA TACCCTGCAA TCATTTATCT CTGGGATGCC CTGGAGCCTG
88901 TCAAATGGAG ATAGGGACCA AGATGGTATG TTGTAATTTT GTGATATAGA
88951 AAATCTGGTC AATTTCCATG AAGCAAGGCC CTCACCCCTA TGGCTGCTTG
89001 TATAAGATAC TGTCCCCTTT TGTACCCTGT GTAGATAATG TGTTTGGAGT
89051 TCCTCCTTTA GTTGAGAAAA ATAGAATCCT TGCTCACTTC CATCCCAAAG
89101 TCTGGATTTG AGAGGGATCA ATGCTTGGTT TGCAGGGAGA ATATGCAGAA
89151 CAAAGGAAGG ACCAGAAAAC TAGAAGTCAG AAGACCTAAG TTCAAGACCC
89201 AAGTTCAAAA CTTATAAACT TAACTTATTT ATTCATTGAT TATGTATTGA
89251 TTCCTTACTC TGAGGCAGGC TTTGCCAGAC AGTGAGAACA CAGTAGTGAG
89301 TAAGGGGGAC AAGACACCTG ACTTCATGGA CCTTAGTTCA AGTGGGGTAA
89351 GAGAGAAAAA TTAAATAAAT CAACTGAATA AGCAAGATAA TTGTAAGATA
89401 AAGATTCCCC AGGCACAGTG GCTCGCGCCT GTAATCCCAG CACTTCGGAA
89451 GGCCAAGGCA GGCAGATCAC CTAAGGTCAG GAGTTCGAGA CTAGCCTGGC
89501 CAACATGACA AAACCCAGTC TCTACTAAAA ATACAACAAA TTAGCTGAGC
89551 ATCATGGTGC GTGCCTGTAA TTCTAGCTAC TCGGGAGGCT GAGGACATGA
89601 AAATCGCTTG AACCTAGGAG GCAGAGGTTG CAGTGAGCCA AGATCACACC
89651 ATTGCGCCCC AGCCTGAGCA GCAGAGAGAG ACTCTGTCAA AAAAAAAAAA
89701 AAAAAAAAAA AATGAAAGTA AAGAAGAAAG AAAGAAAAGA AAAGGAGAAA
89751 GAAAACACGA TTCTCTGAAG AAAAAAGCAA TACACTGAGA GAAGGAAACA
89801 TGAAGGTATT CGTTTAAATA GTGGGTCAGT GAATGCCCTT ACTGAGTAAA
89851 AGTGACATTT AAGCCTAGAT TTCAATGCTG GATGGTATTC ATGCTACAAA
89901 ACAATTTGGA GAATATTCTA GCCAAAAGGG AATAATTTGT GCAATGATTT
89951 GAAAAATGGA AGGACAACCA GGGTAGCTGG AATGTTTATG GCAAGGGAGA
90001 GAGTGATAGA AGATTAAATC AGGAAAACAG AGAAAGTAAC AGATGAGGCA
90051 GTGCTTGACA GGCCATGAAA AGAAGAGTGA CTTTTATTTT AAGTGCATGA
90101 GAAGCCACTG GAAGGTCACA AGTAGAAAGG GATGTGGTCT CATCTGTTTT
90151 AAGAATTTGG TCCAGTCGGC TGGCCGCGGT GGCTCATGCC TGTAATCCCA
90201 GCACTTTGGG AGCCCAAGGC GGGTGGATCA CGAGGTCAGG AATTCGAGAC
90251 CAGCCTGGCC AGCATGGTGA AACCCCGTCT TTACTAAAAA TACAAAAAAT
90301 TAGCTGGGCA TGGTGGCGTG CACCTGTAGT CCTAGCTACT TGGGAGGCTG
90351 AGGCAGGAGA ATTGCTTGAA CCCGCCAGGT GGAGATTGCA GTGAGCCGAG
90401 ATAGCACCAT TGCACTCCAG CCTGGGTGAC AGAGGGAGAC TCCATCTCAA
90451 AAATAAATAA ATAAATAAAT AAAAGAATTT CGCCCAGTCA CTGAACTTCT
90501 TTGTGACTCC CTTTTCTCTC CTGAAAACAA GGATTAAACT ACTGATTGTC
90551 CTTCCAAGAG GTTGTCTGAG TGTCAGATCA TGTTCATTAT AATACTTTGC
90601 TCCAAGTTGT GCTTGATAAA TTTTGAACTG AATTGTTTCA TAACAATATG
90651 AAAATGCTTT ATAAACTGTA AAGGGCCATG CAAGTATAAA GTATTACCAA
90701 TAACCATCAT TTCCCCAAAG CTCTGACTCC TTTCCAGGAG TTTGTGTGGA
90751 ACAGGTAAGA TAACTGGCCA TAAAATGCTT TGAAAACCCT ATGCTAATAA
90801 AAGATACTTT ATATTTATGT TCATTTGTTT ATTGAAGTTT GCATTTGGTT
90851 CCTTTATTCC ATAGCACCAA TGTATTCTCT ATTTTTGGGC TAGGAAACAA
90901 CAAGCAGACT CAAGTGTGTT ATTTAACCTC AAGAAATAAA AATATCCAGA
90951 GATAATATGA TGAGTGAGGC TGAGAGTCAA GTCAGCAAGT CTTTGGTTAG
91001 AACTGGGCAC TTCTTCACTC TCTTACCTGA GTAGATGGGA GCTTGTCCTC
91051 ATTAGTCATA GGCCCCCCGT TACTTATAAA GAAGTTGTGA AAAATAATAC
91101 TGACAATGAT GATAATTTGA ATGACACATG TTTAGTAATG CATATAGATA
91151 TATACTCATG GGTATGTATA TACAGTCCCT TGCTACTTTT CTCAAAGCAT
91201 GTTTTTCTCA TCTATTGTTT TAATTTAGCT CACACTCACA TGCAGAGGTA
91251 GAGTAGGAGT ATTCCAATTG GAGAAATGGC CATGAAGTGC TTAAGTGGTT
91301 TGCTTCAAGG TCACACTGTG AGTGATAGAG GAGTTGAAAC CAAGTCACAG
91351 AGCTCCCTAG TCCTGTGCCA GCACTCTGTA TCAAGACCCC TCAGCTCCTG
91401 CGGGGCCTTG TGAAAAAACA AAAACAAACA AACAAACAAA CAAAAAAAAA
91451 CAGGATCCTG AGCCTCACAT TAAACAATTA GGAACTGGAG CATTTTCACA
91501 CTTTAGAAAA TATTTGATCC ATGTAGCCTA GCCCTCTTCC CTCATGTCAC
91551 ATACAGGGAA ACAGAGGACC ACAAGTAGGA GCCCACTTGG GCAGGTGAGT
91601 TTTCTGCCAA CTGCTCAAGC ACCTACTGAT GCTTCAGCTC TCTGTCTTTT
91651 AACCTCATAT GTAGCTGGTG ACTAAGGTGG ATGGAGATAA TGCAGTAGAA
91701 GTCAAGGTGG TCCCCTCTGA GGACCATCTT ACCAGAGAGG GAATCACAGT
91751 AGGAAGAGAA CTCTTCAGTT AATTGATAAT TTTTTCTTTG CAATGGAAGG
91801 GAGGTCTCTG TGACCTTGGG TCTGACCTCG AGCCTGACAT GCCTTTTTCC
91851 CTAGCCCTCT CTTGCTCTCC CTTCAGGGAT TTGGGCAAGG TAAATCTTCA
91901 AGTTCATTTA CCTTCTTTAA AATTGGGCAG CTTTACACAT TATCTTGGCC
91951 AATTTGAGCC TAAAAAGTGA TGTAGCTCAG AAGCAGTCAA GTTTAGTTGG
92001 ATGAACATGA GTATTAGGCT GGGAAGCTCA TGCCCAAGTG TGAACCTTGT
92051 AGCCTTAATC AAGTGTCTGC CTTAGAGCTA AGCTTCTCTC TTGGTGAAAT
92101 GGTTTAAAAT ACCCATCCAG TACATGTCCT AAAATGGACA TGAGGTTCCT
92151 CTGGGATAAA GGATGAGAAG ATACTTTGTA TTTTGTAACA TTCTACTCAG
92201 ATGCAGGATG TTCATCTCAT TAATATTACA CTCTGGTGCC AGTTTCTGGG
92251 GGGTCAGCTG CAGAGAAGCT AGTTCAGGCT GCAACATCTC ATTAGAAGCT
```

```
92301 GAAATTTGGA TTCAGGAAGA GGAGCATGGA GTGGGTGAGA GCCACTGTCT
92351 GCTGCTCAAG TTCCTGCTGC TATCTGTATT CAGAGAGGCA TCCTGGTACC
92401 TTAGCAGTGC TGCTCAGTGG GACGTCTCTG ACTTTGATGT TGCACGTGTC
92451 AACATTCTAA TAGGGCAGCA GCCGAGATGG GGTATGAGTT TGGAAAGACA
92501 TCTTATGACA GCTTTTTCCT AAAGATGTTT CAAGAGATAA CCCTTTAGAA
92551 ATAACGAAGG TAGTTTATGC ATTTCATAGG AAACCCAGCG GCTTACGTAG
92601 CAGCTCACTT CGAAGTCTGG CATGCGGACG GCTTCCTACT GTCCCGTTTT
92651 TGCCCTCCCT GCACATCTGT GAGAAATCAT CACTTGTCAC AGTAACACAG
92701 TATTGTATTT AGTTACATTG ACAGCAATGG TGAAAGGACT ATAAGCCTAT
92751 TTCCTTCTAA ACTGTTCACA TCAAATGAAC CTTAAACATT TACTCCTCTC
92801 TTAAAATGTA AATCAGATCA CCTCAGCCTA CTGTTTAAAC ATTCTATCAT
92851 GGCTTTCCAT CATGAATAGA ATCCAAATGC CTAACACAAG CTGGATGGTA
92901 GCCTGATCTG ACCTTTGCTG ACCTCTCTGA CCTCCCCTCA CACACAGCTC
92951 CCCTTGCTCA CTGTGCTTGA GCCACACTGG TCTTCATTTG TGCTCAAATA
93001 TGCCAAGTTT TCTCCTACCT TAGGAGCTAC TATTAAAATA CCTAACTAAA
93051 GCTCTAAAGC TCTTCATGCC TGCACCACTC TTTTCTAAGA TATTTCCTGC
93101 CTGCCTCCTT CACATCGAGT CTCAGCCCAG CTCAGCCATC TCTTCAGTCA
93151 GTACTTCGCT GACCTTCCCC TTTGGCCCCA CTCCTACCCC TCTGTACATC
93201 TCCATTACAT TGCCTTTGGT AATGTCTTCT TAGCACATAT CGATTTGTTT
93251 ACCTATTAAT TCCATGCCAT GAGAGGAGAG ATTCTTTCTT TTCTCTTTTT
93301 TTTTTTTTTT AGAAGGGTGT TGTTCTGTCA CCCAGGATGG TGTGCAGTGG
93351 CATGATCTCC GCTCACTGCA ATCTCTGCTC CCTGCCTCCA AGGTTCAACC
93401 TATTCTCCTG CCTCAGCCTC CCAAGTAGCT GAGACTACAG GCACATGTCA
93451 CCACGCCCGG CTAATTTTTG TATTTTAAGT AGAGATGGGG TTTCACCATG
93501 TTGGCCAGGC TGGTCTCAAA CTCCTGGTCT CATGTGATCT ACGTGCCTCA
93551 ACCTCCCAAA GTGCTGGGAT CACAGGCGTA AGCCACCACA CTCAGCCTGA
93601 GATCCTTTCT TTCTTATGGT CTCCTGAATC TCTAGCATGG AAGAATAAAG
93651 GTGCCGTAGC ACAGAATAGA TCTATTATCC AATGAATATT TGTTGGAGGA
93701 ATGAATCAAT CCTCTCTTTT TACAGAGGGA GAAGTTAGGA CCAGAGAAGA
93751 GTAGACATCA TTGTGTTTCT GAAGGTTTTA TGTTAGCACC TTTGGGCCAT
93801 GCTGGGACCT TGGCAAATTA TAGCATTCAA GGGTTTTAGG GTAATGTTCA
93851 TGGATCCCTA GAAAGTCAGC AAATGGGGAT CAGGGTGTCT TGAGCCCTGT
93901 GAAAGTGTTG GCATATTTCT GGGGAGAAGA TTCATAGCTT TTATTAGTAC
93951 TTCAAATAGA TATTTGATCC ATTGGTAGCA CCCATCAATT TTTCCTTTTA
94001 ATTAGCTTAG TTTGGGGAAT GTGGAGCGAG CCTAAAAGAG GATAGATGTC
94051 TCAGCACCAC CTTGAAGACC TTTCTTCTTT TTCACTGACA GCATGGTTCC
94101 ATCGTTCTGC CCCTGAATAC GGGGACAGCT CCTCTTTTTC TATTACCAGA
94151 GCATATCTTT CTTAAATTCA CTATTTCCAT GATGAATCTA CAGTGCCAGA
94201 AGCTAGAGTC TGGAATCAAA GAATTCCAGA GTTGGGAGAG CACTTAATTC
94251 AGTGTTCATA AACCAAAGTG TACAGCAGAA TTTTCTGGGG AGCTTTTTAC
94301 AACTATGCGT TTCCCACTCC TTCCCCTGAC TTTTATTTGT TTGTTTATTT
94351 TTGTTAGAGA TAAGATCTTA CTCTGTCACC CAGGCTGGAG TTCAGTGGCA
94401 CGATCACAGC TCACTATAGC CTTGAACTCC TGGGCACAGC AATCATCCAC
94451 CTGAGCCTCC CAAGTAACCA GGACTACAGG GGGTGTGCCA CCATGCCCAG
94501 CTAATTTTTG TATTTTTGGT AGAGACGGGG TTTCATCATG TTGCCCAGCC
94551 TCATCTCAAA CTCCTGACCT CAAGCAATTC TCCCACCTCA GCCTCCCAAA
94601 GTGCTGGGAT TACAGGCATG AGCCACCACA CTTAGCTAAT TGTAGTATTT
94651 TTGGTACAGA TGGGGCTTCG CCATGTTGCC CAGACTCATT TTGAACTCCT
94701 GGGCTCAAGT GATCCGTCTG CCTCAGCCTC CCAAAGTGCT GGGACTGCAA
94751 GTGTGAGCCT CTGCACCCGG GTCCCCTGAC TTTTAGAAGT GGAGTATATT
94801 AGGTTCCTAG TGTTTCTGTA ACAAAATTCC ACAAGCAGGA TGGCTTAAAA
94851 CAACAGAAAC TCATGGTCTC ATAGTTCTGA AGGATAGAAG TCTGAAATGA
94901 AAGTGTTGCT AGGGCTGTGC TCTCTCTAAA ACCTGTAAGT GAGAATCCTT
94951 CCTTGACTCT TCCTAGCTTC TGGTGGTTGC CATCAATCCT GGGTGATCCT
95001 TGACTTGAAA CTGTCAAAGA ACTCCTGCAC TTTAATTTCC TCCTCTGTCA
95051 CCACATGGCT CTTTCCCCTC GTGTGTCTGT GTGTCTTTTC TTCTTATAAG
95101 GACACCAATC AAATTGTATT AAGGTCCACC CTACTCCAGT ATGACCACAT
95151 CCTAACTTTT TATGTCTACA ATGACCCTAT TTCCAAATAA GGTCACATTC
95201 TGAGGTACTG TAAGTTGAAA CTTTGTTTTC AGGAGATACC CAAAACATGA
95251 CATGACATGG GGTATGGGAA TCTGTATTTT TTAAAAAAAC TCCACCAGTG
95301 ATTGTGTTGA GACACATTGC TCTTATACAC ATGCCCTTCA CTGAAAAGGT
95351 GAGAGAAACT GAGGGCTGGG AAAGGGACAA GCTCAGAGTC ACTCAGAGTC
95401 TCAATGACCC AGACTGGGGC ACCAAGTATC ATGATTCCCC CAACATTCTT
95451 TCTAATGTGC CAAGCTGCCT TTTGGAGTGT GGACCTGGTG ATGCTCTCAC
95501 TGGTCTCCAA GGACCAGCAT TTAAGTGAAT ATTTCCAGTG GTCCATGTCT
95551 GCCCCAAGGG GCTACTTACT ACTCCAGTGT AACTAGAGGG GCATTAGTGG
95601 ATCTTTTGGT CAAATCAACT GCCTCCATCC CAAAGGATAT GGTTTTGGGG
95651 CAAGTTGGAC TACTCCAGCA GTCATGGACA GGCACCCCAG CTTCCTCCAA
95701 GTTGTACTCA TGTTGCCCCA AATTACTGTG GCGGATGGCT GGTACTATGA
95751 TGAAATTCTG TGTTATATGT GTGAGAAGAC TTCCTTCCTC ATCCATCACT
95801 TACCCAGAAC ACTAACATGT GGTATATATT AACACGATCC TCTCTTGGGT
```

```
95851 TAGCATGTGG GTGGGTTCTT AGGAAAATAA ATTAACATCT GGAAAGACAA
95901 CCCAAGCCTT GCCCACAGTG TTTGAGATGT TACTCAGTGG AAATATTGGT
95951 TGTCGTGCCC AATTTGTGTC CCCTCCCATT GTGTTTTTAT GCTGGAAGTC
96001 TGCACAATCT GTTGATCCCC GTCTCAACTG GCTCCCTCAC AGCAGATGCA
96051 TTTAAAGTCA CAGATCTCAA AGTAAGCAAA TCTAAAGTGT TTAATCTATT
96101 ATTAATCAGC TAGTTGCCCA AATGATAGAG CTCTAGGGGA CCCTGAGGAA
96151 GACATCAATA TTTATGGCCT CCTTAGGGAG TGCATATTTT TCTCTCTCTC
96201 CTTTATTCCC ACCTTTCTTG CCTTCAGATG AGAATGGAAA TATGAAGCCT
96251 GTTATGTTTT ATGCCATTGT ACAAGGCAGG AATGTCATGT TTTGAAATGA
96301 GATGACTACA ATGTGGTATT TTATGTTTGT TTGAGAATAT TAGCTGTTAG
96351 GGCTGTGGTA ACCTCTACCA GATTGGGTTA AACAAAAGCA GTCTGCAGTC
96401 CATGATAATA CAATGGAAAA GCATAGGGAA CACAAGAAAC CTGGGTGAAC
96451 TTTTTCACAA ACAATTCATT TTTCTAATGA GGCAACTAAA GCTCAGAAAA
96501 GGAAAGGGTC TTCCTTGTGA TCATACATTC ATTTTATCAT TCAACAAACC
96551 TTAACTGAAT ACCTCCTATT CAACAGTGCA CGAGCTGCCA GGAACAATGA
96601 AGTAAGTATT AACAGAAATG CCTAACATTT ACTGAGCACT TCTTAGGTGC
96651 TGGGTACACA CTAAGTCCTT CAAGTAGTCT CTCCTGCTGA AAGTGCTATT
96701 CCAAGTGCAA GTTGGAACAG CAGGTGCCTT GGCACCAAAG CTCTATGTGA
96751 CCGACCTTTC TGACCTGGCC TCACTTCCTT CCCCCTCCCC TCATTTCTCT
96801 CTCTTCTCTC CCTTTATTTT TCTTTTCTTT CTCTCTCTCT TTTTTTTTTT
96851 TTTTTTTTTT TTTTGAGAC AGACTCTTGC TCTGTCGCCC AGGCTGGAGT
96901 ACACTGTCGC GATCTCAGCT CACTGCAACC TCCACCTCCC GGGTCCAAGC
96951 AATTTTCCTG TCTCACCCTC CCAAGTAGCT GGGACTACAG GCACCCACAA
97001 CCATGCCCAG CTAATTTTTG TGTTTTTAGT AGAGACAGGG TTTCACCATA
97051 TTGGTCAGGC TGGTCGTGAA ATCCTGACCT CAGGTGATCC GCCCTCCTCG
97101 GCCTCCCAAA GTGCTGGGAT TACAGGTGTG AGCCACTGTG CCCGGCCCCT
97151 GTCCTCATTT CTTATGCTCC AGCCTCAGTG GCTTTCATTG TTACTGTTTT
97201 TGGAATATAA ATCAGGCTTA TTGCCCCTTT GGACCTTTGA ATCACCTGTC
97251 CATGCTGACT AGATTCCTCT TCCCATCCTC ATTTCTGGCT ACTCATATTT
97301 CAGGTCTTAG CACAAAAATCT TTTTCAGCAA TTTCTTGAAA GTGAGTCACC
97351 CCATTCTCAC CCATTAAGAG ATAGTGACTA TCGCTATCAT AAGATAGTCA
97401 CTATCTCTTA ACAAACCTGT TTTAGTGTCA TCCTACACAG TGATGTGCTG
97451 TCAAATCCTT AACACCTGAG TCTGATGGGG TGGTGGTGAG GAGGGGGAGT
97501 GTGGTGAGGA GGGGGAGTGT GCTGATTTCA AGCATTTGCC AATTTTCATG
97551 ATGTAAAGAC CTTTACTATG GCTGATTCAA TAGTTCAAGC TATCAGCATG
97601 ATGTCACTGA ATGAGAAGTT GGGAAGAGAT ATACACAGTC CACTCTTGTG
97651 AGCCACTATG CACCAGCTCT GACATACTTC TTGTTGTCTG AAATTATCAT
97701 ATTTATTTGT TTAGTTGTAA TTCTTTTACC CTCCTATGCA ATGTAAGCTC
97751 CAAAGGAAGA GGAACCTTAT TTGTTCTGGT TATGGTTGTA TTTCTAGCAT
97801 CTGGAACAGG GCCAAGAATA TGATAGTAAC TTAATAAATA ACTGTGGAAT
97851 GAATTATGAA TGAATGAATG AGAATTCTCA CAATAACTCG GTTAGGTAGG
97901 TGCTACTATT ATCCTCATTC ACCGAGTAAG GAGACTAAAA TGTGGCTAGA
97951 GATTAAATAA CTTGTCCAAG CTCACACAGT CAGTGCATGG GATTGCCAGG
98001 ATTTGAATCA AGGCAATTTT TCTCCAGAGT CTCTTCTCTA AATCCCAAGT
98051 TATATGAATT TAACAAAGTC ACTCCTCTTG AAGAGCTCAA AGTCTAGAGA
98101 AGAAATAGAC ACTTGAACAA AAGGGGAATA ATGCACCCAT GACAATGACA
98151 AATATGTACG TAATATACAC TCAGAGACCT CGGTGAGTGA GAACCAGGAG
98201 AGTGGCATGG TGATTAAGTA AGGTAATATT TGATGGAGTC TTGGAGGATA
98251 TCATTGGAGT GCTTTTTCCA CCATGCCAAA GTTGCTTCCC ACCTGGAAAA
98301 ACTGACATTA TGAAATCTTT CTTGGATAAG GAAGAGAAAT CAGGCTTTAC
98351 TCAAATGTAA AGAAAAGCAC AGAAGCATTA TTGAGATGGT TTGAGGGTCA
98401 GCCGGATATT TCAGTACACA AGAAAACTGA TAGTCCACTT GAGGCACGTT
98451 TCCAGACAGG GTCTTAACTT CTCCTCACTG CTGATCTTGT GACATGTTCT
98501 CTGATGAAGG GCTTTTTTAA GCTCTAGGTT GAATTGCTCA CCCATTTCTG
98551 CTTCTGATTC TTTGCCTCCT GCATCAAAAT TTCAGGTGGC TACTCACCTG
98601 GGATGGTAGT GTGATATAGT TTGGATGTTT GCTCCCACCC AAATCTCATG
98651 TTGAATTGTA ATCCCCAATG CTGAAGGTGG GGCCTAGTGG GAGGTGTGTG
98701 GGTCATGGGG GCAGATCCCT CAGGGCTTGG TGCTGTTCTT CCAATAGGGA
98751 CTGACTTCTC ATAAGATCTA GTTGTTATAA AATGTGGCAC CTCCCCCACC
98801 ACCCTCTCTC ACTCTTGTTT TTGCCATGTG ACATGCTTGC TCCCACTTCA
98851 CTACCCACCA TGATTATAAG CTTCAGAGG CCTCCCCAGA AGCAGATGCT
98901 GGTGCTATGC TTCCTGTACT GCCTGCAGAA CTGTGAGCCA ATTAAACCTC
98951 TTAAATAAAT TATCCAGTCT CAGGTATTTC TTTACAGCAG TGCAAGAACA
99001 GCCTAACACA TAGTGAGTGG ACAGATTACT ATTGCAGTCT CTGATTGTTC
99051 TAGTAGCCAG GCTTGAGAAA CCACAGAGTC ATCACTGACA ACTGCCTTGG
99101 CACTCCCTGC CTCTTCTTCT CCCCTCCCCA ATCCCAAATA GCTACTAGGT
99151 TCCTTTGTCA GGTCTTGCAT CATACCTTTC CCTTCATCTC CACAGCTATC
99201 ATTCTGGTCC AAGATATGGG TCTATTCATC CACTCATTCA TTCAACATAC
99251 GCTGAGTTGT TGTCTGCTCT GTCCCAGGCA ATGTGGTAGG CTCAGGGAAT
99301 ACAATGATAA CCAAAAGCAG ACATGACTCC TACACTCACA GATCCTATTT
99351 CCAGGGGGGC ATATTCTAGT GGGGCAAGCA GTTGTAAATC AAATAACCAC
```

FIGURE 3, page 28 of 122

```
99401 CTGCATAAAT GGATAATGCC ACTGTGATGA AAATTACCAA GGGGAGAAGG
99451 ACATGGTGCT GGGGGAGTCT CTAACAGGGC ATTTGACATA ATCAGGAACA
99501 CCAGGGAAGT AGTCACATTT ATACCAAAAT CTTAGGTTCT AAAAAATGAG
99551 AAAGCATTAA GGTATCGAAT GGAGGAAAGG TCATTCCTGC CAATTGAAAA
99601 GACATGTACA AATATTCTTC AATGGAAGGA CCTTAGCTCC TGCCAGGATA
99651 GTGAAAAGCA GGTTGGTTTG GATGGGGACA GAGAACACAG GCAGAGAATG
99701 ATGTGGGATC AGGCTGAATA AATACGGCAG TGTTAGCCTC TGTGTCTAGA
99751 TATTTGAGGG AATCAATTTT TGCACTCCCT CTATAATACC TAGTCTCCCC
99801 TTCTGGCTCA TTTTGTGCAC CCTTTGCCAA ATTCCTCTTT CTAAAGCACT
99851 GGGTTTGTGT GTATGTGTAT GCACGCACTT CCCCCAACCC CCATGCCTCC
99901 ATTACTCCTC TACTCCAAAA AATGTCAGTT GTTTTTCTAG TGCCTGCAAT
99951 GTAAGGCCTA AGCCCACTGG CATCAAAGAC TTCTGTAATT TAGCATCAAC
100001 TAAACTTTCA GCTGTCACTT CCCACTGTTG GGAAACCATA TAACATGATG
100051 TTAGAACATA GTGACAGAAG GAGCTTTGGA GTCAAATAGC TGATGTAAAT
100101 CTTGTTTCTT CCATTTTCTG CCTTTGTGAC CTAGGATAGA TTGCTTAATC
100151 CTGCTGAGCC TATGGTTTTA TACTTTTAAA TTGAAATTAT AGTGTAAAGT
100201 TTAAATCAGA TAATTAAATA AAGCCTTGAG CATAATCCAT GATGTACTGA
100251 AAGTAATGAT TAAATAATAG TCTATTAGAC TATACAGCCT ACTCACTATC
100301 TCTCATTCTT ATCTAGTATT TACTAGCTAG TTAGGCACTA TTTCTATTGC
100351 TTAGAACAAC TTCTTTCGCA TCTATCCAAA ATGTATAACC CTTTGGTCAC
100401 CAGATCAATA TCTTCAGCTC CTTCCTTTCA GGTACTATAT ATTGCATTTG
100451 CTTCATAACA CCTAATACAA TGCATGAAGC ATGCTTTTAA TAAACATTCC
100501 TTGGATGGAT GAATAAATAA ATGAATAAAG AAATGAAGTA AAAGAAAGTC
100551 AATTTTTATA TTATTCTAAG TGAGGGAAAA AAGAGAAACG AATCAAAATA
100601 TCTTGGAAAT AAAATTCTGT TCCTCTCTGA GCTTTTGATT TGTTTATAAG
100651 CTGGGGAGCA TGTTGCTTAC CATTTATTTA GTCTCACAAG TATGTTAACA
100701 TCATCAACAT AAGGTTTATG AAGTACTTTA TACTGCCTGG AGGAAGGATG
100751 GTATAGAAAT TTAAAATATT ATATATGATC CTTCCAGGAA GAAAAAAAGA
100801 AGCAATATCT ATTCTGTGAG GTGCATCAAT TTTGGATCAC TCTAATGGAA
100851 GTGCCCCGAG CAGTTGGTTT ATTTCTTCAA ATGTGAATTA ATTTATACAT
100901 TTCAAAGCTC CTGATGGATA CTTTTCATTT TAATTAAGTA CATTTTTGCC
100951 AAATTTCAAC TTTAAAAACT CAACAAATTT GTTCCCACAC TTGCTTTGTA
101001 GAATTTGCAA TATTAGATAT AAATTTATTA TAAAAGGGTA TGTTAGAAAC
101051 TTCTCATACT GAAATCGGCC ACCCAGCAAC TTTTTCTTAG GATTCAAGTG
101101 CTCTAACATG TGCTTGCTTG TTTGTCTGTG TGATTCGGTG GTTTTATTTT
101151 GATTTTCATA GAAAATAATA AATATGTCTT GAAATGATCA TTTCATTACT
101201 GAGTATTGCC AGAGGTTCAG AGTCCTTGTG TGCATCTGCA TTTACTCTCA
101251 GGTTGGCACT ATAAACTGCT ACTGCAATTG TGATAAACTA TCGAGAACAG
101301 AAAAAAGAAA ATTTGATACA GAAATAATGC ATAGTAAAAT AATGCTGGGT
101351 GAGGGCTCAC TGACATAATA ATGTACTGTA TGGAAAAAGA GGGAAGATGC
101401 TGTTGAAGAA ACTGAATATT CACGCAGCGC ACAGTAGTTC AGGTGTGCTG
101451 AGCTCACAGA ATCAATGTGA TTGCACAGTA CTATATTGCT GTCACAAATG
101501 GTGTTTTGGA GTAAACAAAT ACCATTGTTT CTAACATTAA ATTAATATTG
101551 GTGATTCAAA ATGTACTGAA ATTATAATTT GTGTTTGTCT CATTTGTAAA
101601 TTTCCTTTGG TTTTATAGTT TTAAGATAGC TATAAATAAA GGATTGATCT
101651 CTGACTTCAT GTTTGTACAT TTTCAAGTAT CATTATAGTA AATATAATTT
101701 GTCAACATTG TGGATTCAGA AGAACAGTTT CCTTCAAAAA GCGTTCATAA
101751 ATTACATCAG TTCGAAAAAA TTGCATTAGT AGATGATAGT AAAAGCCTCC
101801 AAGAAAGTGT TGCATTATGG CCAAGCTTTA TTATACCAAG TTCACAAAAC
101851 ATAAAGGGAG GAATCAGAAA TGCAGAGAAT GGCAGATATG GAAACAGCAG
101901 CTTTGCAGGT AAGAGTAAAA TACTGAAGTT CTAAGAGGTT TTTAGGGTTG
101951 GATAAAATGG AAAAATCAAG ACTGAGAGAC CGCCAGAGTC CTGTGAGTAT
102001 TGTTGATGAA CTCTTAAAAT GTGCAAACTC AACAAGCTAT TGAAATGTGT
102051 GTGTGTGTGT GTGTGTTACA ATATATGTAT CTCTTCTTCA ATGCTTTGGA
102101 GATCTTTTTC CTACAGGACT ACTTCTCTAA TTTACCAATA ACAGGCTTTG
102151 TGGAAATGAT ACCAATTTTA AAGAAATTTA CTTTACACCT ATATTTTCCT
102201 AAAAAAAAAT TTGTGAAACA AGGGCATCCT TATTTTACCT CTTCAAAACT
102251 GTTATCTATA CCAAGTTATC ATAAAAGCAG TAAACCTGCA TTTGTTAGTT
102301 TTTAAACTTT ATTTTCAACT TCCTATGTCT ATAAATGTTT GTTCTTGTTT
102351 AGGATGTGTA CTGTGCTTGT TAGAAGAATA CCACCTTTTT TTCTTACCCT
102401 TTTAAAGTTG AGAAGATTAT TTGTAAGAGT GTGAAATGGT CTAAGCATTG
102451 CCCCTTTAAA TGGGGGTATT GTGTTAATTG TAAGCACTGC AAAGTGGGTT
102501 GCTATATTGT GGCTGTTGTA CTCAGTGTCA AAAGATTTAG TTCCTTCTTG
102551 ACCCAGTCCT AGTTATTCAA GAGTCATCAA ACAGAGATAC ACAATTTTAA
102601 ATTGTTTTTC AGAATGAATC TGAAGAGAGC GAAGAGTTGA GTGGAGAAGT
102651 CAGCTAGATC ATCCTTGTCT ATCTATGCAG ACTCCTTCCC ATAATTTTTC
102701 CCCAATCTAG TTTATGCCTA ATTTTATACC AGGAATTTCT TCCTGACCTT
102751 TTAATTGCCT GTCCTTAGGG CATGAAAATT ATGAGTGTAA TTTTACAGAC
102801 CATTCTTAAC TTTTCAAAAC CATTCCAACG ATATTCATCT AAGAAATGGC
102851 CAGTGTTTGT GGAGCACTAA TTTGTCACGC AGCATTGTGC TAGACATTCA
102901 AGATATCCCA TTGAGTATCG CACGAAAACC CTGACCAACA CATCCCTATA
```

FIGURE 3, page 29 of 122

```
102951 CCAACTAGGT CAGATCCTCA TTCACAGGTA TTCATAATAC ATAAAATTCC
103001 CCTGCATAGC ACTAGGTCAC ATGTAGGCAA TAATTATTTA TCTTGTATAT
103051 GCCTTTTCAC TCAACTGTGA GCTCCTAGAG GACATAGGTA AAATCTGTTT
103101 TGTTCACTGC TGAATTCCTA GAACCCAACA TAGTATCTAG CACCAAGAAG
103151 CACTCAATAG AAGTTGGATG AACTAAAGAA GAAATGGTTG GTCTAGGAAG
103201 GGGTTGGGAC CATAAGAAGC ATACTGTTAT TTAAGAAGCA AGGAAGGCAT
103251 TTAAAAAGCA CAGAATTGAA TAAAGGCAGA TTCCTGCAGC AAGAATGCCA
103301 CACAAGTCAG AAAGTAGGCC AGATTATTAA CTACAAACTA AGGAAGTAGA
103351 ATAACCTTTT GTGATTGCAA CATGAAAGCA AAAGTCCAAA CCAAGAATCA
103401 TCTCAAAAGA TAGAAAGTAT ATTAGGAAAA CATGCTTTAA CTGTACCCGG
103451 AAGAAAAAGA AGTGGGCTAC CCCTTTTAGT GTGTGAGGAG GGAAAGCAAA
103501 TGACTGATTT CAAAAGGCAA AAACATCTCG GGCTTTATTC TTTTGCCCCA
103551 CCTTAGTTTT TCTTTCCCAG AGTAAAGGCA GTGATATTAT AAAAGCACAC
103601 AGCATCCAGA GGGGTTGGGG AGGAGTATGG CCATGAAACT AAGGGCTGAT
103651 GAAAGATGAT TTTAGAAGTT GGTTCTTTTC ATAGCAAGAG GCTGTATTCC
103701 TTGAACTGTC CAAGCCATGG CCTGTTGTTT TTCAGAACTC ACAGAAGGTG
103751 GTAAAGGTCA GAGAGTGTCC CTGAAACTAG TAGATGGCTC TAGATTCCAT
103801 TGAATTCCTG CCAAGGGGCC TGACAGCATA GATGAATTCT ACTACTTCCA
103851 GCTTCCTCTA GAGTTAGCAG AGTCCAGGTT TGGGAGTCAG GAGACCCAGA
103901 TTCTAGTCCT GTCTGTGCCG TGGTCTCTTT GTGGTTTTGA GCATATCACT
103951 TTATCTCTTG TATCCTCAGT TTCCTCTTGT GTAAAAAGGA GATTTTTCTC
104001 ATCACTAGTT GGTAGGACAA GGACATTTTT AATTTATTTT TTCTCCCTAA
104051 ATAATGCATG CATAACTTAC AAAATCAAAT GTTACTTCAA GTCATAAGAC
104101 AAAATTCAAC ATTCTCTTCC CTCCTCCCTT TCTATCTTGG ATTCCAGCTC
104151 TCATAGGGGA TCACTTTAGG CTCTCTTAGC TGTTTCTTCT GATATTTTAC
104201 CTTTGTATCT CTTGTATTGC CTGTTCTGGT TTGGGCTGCT ATAACAAATA
104251 CTATAGACTG GGTGGCTTAA ACAAAAGATG TTTATTTCTC AGTTCTGGAG
104301 GCTGGGAAGT ACAAGATCAA TGTGAGGCCA ATTTGGGTCT TGGCAAAGAC
104351 CTGCTTCCTA GTTTACAGAT GGCCACCTTC TTGCTGCATC TTTGCATGAA
104401 AGAGAGAGGA GAGACAGAGA GAAATTGAGT CTCTTTCTCT TCTTAGAGTC
104451 TCATCATGGG GCTCCACCCT CGTGACCTCT TCTAAATCTG ATTAACTGCC
104501 AGGCGCAGTG GCTCACACCT GTGATCCCAG CACTTTGGGA GGCCGAGGTG
104551 GGTGGATTGC TCAAGGTCAG GAGTTGGAGA CCAACCTGGC CAAGATGGCA
104601 AAACCCTGTC TTTACTAAAA ATACAAAAAA TTAGCCTGGC TTGGTAACAC
104651 ATGCCCGTAG TCGCAGCCAC TCGGGAGGCT GAGGCATGAG AATCACTTGA
104701 GCCTGGAAGG TGGAGGATGC AGTAAGCTGA CATCACGCCA CTGCCCTCCC
104751 ACCTGGGTGA CAGAGTAAAA TTCCATCTCA AAAAAATAAA AAATAATAAT
104801 AAATCTGATT ACCCCCCAAA GACTCCATCT TCTAATCCTA TCCCACTAGA
104851 GATTAGGGTT TCAACTTATG AATTTGTGTA GGGGGCACAA ACATGGAGTC
104901 CATAGCAATG CCGTTTCCTG ATTTTTCAAT TTTAGATATT AGTTTTTGAC
104951 TGTACTATGG CAGATGCAGA ATATTAAATT AATATTCAGT ATTTACGTTA
105001 TGATGACTAA ATAAATACCT TCACAACCAA GCCAAATAGC ACACTCTTAA
105051 ACTTTTTGTG TTTCTGCTTT ATTGTTTTTT GTTTGTTTGC TTGCTTGCTT
105101 GCTTTGTTTA TTTTATTCTG CATATTTTAT CATTGTGACTCA GATCCAAAAT
105151 TTCTGAGCAA ACCACAGAAT TCCTCCCAGT TACAATCAGG AGTGTGAGAT
105201 GATCTCTCAG TTGCATGGTT TTCCCAGAGA CCTTCCTCTG GGAGCCCCAT
105251 TCAGCTGAAG CCTGACCTGG TTGCTGCTGT GACCTGCAGG AGAGCTATCT
105301 TCCTGGGACC AACACTTTTC GCTAGTTCAG GCTCTCCTAT TCTCTATATC
105351 TCATTCTTCC TCATTACCAG TTATGCTCTC ATTTTGGCAG AATGCATTTT
105401 CCCGTAGTTT CTTAAGAAAG ACAACATGAG GGTAAATTTT TAGATCTTGC
105451 ATATTTGAAA TAGTTTTTAT TCCACTCTTA AACTTCATTG ATTGGAGATG
105501 AAATGCAAGC TTGGAAATAA TTTTTATTCA GAATTTTGCA CACATTATTT
105551 CATTATCTTC TTTTTTCCAT TGTGGCTGAT TAAAAAGTCC AATGTTATTC
105601 TGCATGCTCC TTCTTTGTTT GGGATTTATT GTCCCTTCTC CTCCTCCAGA
105651 AGCTGTTACG ATTATCTTTT TGTCTCTAAA GTTCTAACTT CAAGACGATC
105701 GCCTTTTTTA ATTCACAGGT CATTCATGGG GCTAGAAAGA CATTCTGTAA
105751 GCTTTTTCCA CCTGAAGACT CAGACCCTTC AGTTTTAAGA GATTTTCTTT
105801 TGTAATTTAT TTGATATCAT CCTTGCCTTC ATTTCTGCTC TTTCATTTGC
105851 AGTTCCATAT GTTAGGCTTC CAAGATTCTA TTTCTTTGAC TTTTATTTTA
105901 TTTTTTGGGT GATACCTTCA ACTTCGTCTT TCAGTATTTT TGTCAACTAA
105951 TATATTTATC TACTGCATTA ACTTCCTAGA GTTCTTTTTT GCTTTTTGAT
106001 TTTTCCTTCA TTATAGCATT CTATTCATAC TCTAGAATGA GTGTATGTTT
106051 TTTTAATGTG TTCTTTTGGT CCCTAAATTG TGCTTGTTTC CCATGATTTA
106101 TTTTCATTCA TTTGCTTGTT AATTTTAATT TCTCCCTCTC CCTCCTCCAT
106151 ATTTAGAGGC CCTTGACTAT CTGCTCTTAT AAGTACCACA AAGCCAATGG
106201 GCTCTTCTGC ATGCAAGTAG GAAGATGGCC AGTAAGTGTC CTCTCCCTTA
106251 TTCTCAGCTA TACCTGGTGA TCCTAACCTA GAGTCTAAAT ACTTTGTCTT
106301 CTTCAGAGTC CACCCCCAGT CTTCTGCTTG GCTGAAAAAG AGGGATTACC
106351 TGGCTGCATA GGCTAGGGCA GGGGCTCTGG GGCTTTCCAC CAGGTTTTAC
106401 CCCATCCCAT ACCTCAGACT TCAAAGTATC CAGTGCTTCA TATTTTTACA
106451 CCTTTCTTGT GATCTGTGGT TTTATGGCTT TCTTCTTATT GACTCTACTC
```

FIGURE 3, page 30 of 122

```
106501 ACTTCCTCTT CACAGATGGT TATTTCAGCT TTCTTCACCT TGCTAAGTCA
106551 GTTACCTTCA TCCACTCTCC ATCCTTCAGA TGTTGTACTT CCTTTGTCTT
106601 CTCTTCCCTC TTTTAAGTTT CTCTTTGATC TGTATATTCA CACCTATTTT
106651 ATTATTTTGC TGTGATTTAT GTGAGTTTGG GGGAGATAGC AAAGATAAGC
106701 ATGTATGTTC CACATCACAT GCATCAGACA CAGTGTTGTG AAACTGTAAT
106751 TTTTAAAATA AACTTTTATT GTAGTTTTAG ATTTACAGAA AGTTCACAAG
106801 GTTAGTTCAG AGAGTTCCCA AATACTCTGT GCTCCATTTT TCTCCCCTAT
106851 GATTAAAATC TTACATTAGT GTGGTGCATT TGTCACAGTT AATGAACCAA
106901 TACTAATACT AATACATTAT TATTAACTAA CACTAAATAC TTGTTTAGCT
106951 AGCTCTTTGG AAAGAAGTCA CTATGTCCAG TCTACATTTA AGAAGTGATG
107001 AGTTACACTC TACCTCTTTG AGGGCAGAGT GTCTATGTAA ATTATTTCAA
107051 ATTATTCTGA CTGGGAAATT TGTTCTTCT CACTATTTAT TTACATATCC
107101 AGTCATTTAT TTATATCAAT ATGGATTCAA GGATATCTAT TTTATACTTT
107151 GGGTTATAAT TCAATACCAT TTCATTTATT TTATTGCTCA CATTGTGAAA
107201 TGCTTTTTAA TTGTAAACCT TTATCTAAAA AGCAAGATAT GAGTTAAATA
107251 ATATAATATA ATATATATAT AATTAATATA TATAATATAA TGTAAATACG
107301 GTCTACATCT TAGAAATAGT TCTTTAGTCC TTTACTAACT AACAAAGTGC
107351 TAGACACAGA ATGCTGGGCA GGCACATAGG ATTGGAACAC TAAATACTTC
107401 TTTGGCTAAC TTAGTGCTTT TAAATATATA TTCAGTCATT TCTAAATTCC
107451 CAGTGTCATG TTCCATGAGA GGTCACATAG ATGCATAAAA GCTCCCTCAA
107501 GGACTGTAAC CTTATTAGGG AAATACACAT ATATAGACAA TAAAAAAAAA
107551 AACAGGTCAA CACTGTCACT AAGTAGCAAA TTATGTCATT TTCATAGTTT
107601 AAGAGTGACA GATTTCATGG CCTGAGTGAT CAATTTGGAT GCATCCATCA
107651 TGGCTGGCAT CCCAGAAAAG GCTGGGAATG ATTTAGACAG AGTGAAATGA
107701 GAGAGTCTTT TAACCACACA GGGTATAACA AGTATGCATC TATTCTTTTT
107751 GGAATGTTTA AAAATTATCA AATCAGAAGC ATCTTAAAAT TCACTTTTCT
107801 TTGAAAAATG TATGCAAGAT CCAGCCACTT TATTTTTGTT CATATTTGGT
107851 TTTCGGCTCT GTCCACATGT ACATTTCAAA TCCAACAAA CAATTCCATT
107901 GTTTATACAT TGTGGCTTCC AGCTGACAAA ACCCCTTTAT ACACTGGCTC
107951 ACTGATCCCC ACAGCAGGCC TGTGAAAGAG GCAGTTACAA CAGGTATTAC
108001 ATAGAGCTCC ATTTTGCAGA TGGGGAAATG GAGGCCCCTG ATTTTCAGGA
108051 GGTTGCACAG GTACAAATGG GAGAGGTGGA TCTAGAACTC AGCACTCCTG
108101 ACTCCAAATC CAAGGCTCTG TTCATCAACT TGGAGCCCCT GTTCTGACGC
108151 TGGAAAAGCT GGGTGGAGGA GAGGCAGGAG AGATGGAGAC TCTAAAAACT
108201 CAGTGTTGTG GTTTGTTAGG TCTCTGGTGT CCTTACTCTC CCTTCTCAAA
108251 TGAAATGTAA TATCTCAGCC TTAGAGATTA AAATGGGTTG CCAGTTATTC
108301 TCCTTCCTTT TCCAGGAAGA GGGGATTCTG CACCACTAAT CTTTGCTAGT
108351 TGAACAAGTT GTTTAATGAA AAATCATATT TGTTTGCTAA AGCTGGTCCC
108401 ACCGGCAAGC CGGTGCTAGT GCCACTCAGC TGTCATACAG GCTGATGGGT
108451 CAGGCAAGAG GTGGACGTAG GGTCTCTGGG AATGGTCTGA GCTCACCCGG
108501 TCCCGTGGCC TCCCCAGGCA TTCTGCACAC TTGGCTGTCT GCAGCCTCCT
108551 CTGCTAGGAA TGAAGCAGAG AGAGCAAGCA AACACCACCA GGAAAGCTTC
108601 TTTAAGGTCC TTTGAAGGGT TCACTCTGCG GGAGACTGAC GGTTTTGAAC
108651 ATTTCAGCTC TGCAGAGCCT TAAGCCCTGT TTTGAAGGGG CGCTTTGGTC
108701 AATAGAAATT TGGTCCTTAG AACTCCACTTT CCCTCTTTTC CTTTGTATAC
108751 TTCAACTCTT AGTACGTTCA GGGACTACCT GAATATGAAT TGGTTATTGA
108801 GACTTTCAGA GGCAGGATCT CTGAAGGTCT GTGCCATGGA TCCTGCACCC
108851 CATTTTGCAA TTTTGCATGT TATTCTTCTT TCTAGGTTTG TGGCCCAATT
108901 AGGGGATCAC CAAATCTTTT TCAAGAACTC AGGTTCTATA GGCAGACTGC
108951 CAGGGTTTGT ATTCTGGTTG CTTCATTTCA CATCTATGTG GCCTCAGACC
109001 AGTTATTTAA AGCCTAGGAG CCTCACTTTT CTCATCTAAA AAGAAGCAAT
109051 GAGTTCTTGC TTCAGAGGAT GATTGAGTAT TCAGTGAGAT AATGCAATGG
109101 TCCCTAGTAC ATAGAAGCAC TCTTAAAATA TTAACATTAG TTTTACCTAT
109151 TATTGAATAA ACTTTGCTAT TTCTGAGTGC CAAAGGAAAT ACCAAGATGG
109201 CTAAAAAACC ATACTTGCCC TCAAGAAAAT CACAGTCTAG CTGGGTCCAG
109251 TGGCTTATGC CTGTAATTCC AGCACTTTGG GAGATAAATG CAGGAGAATT
109301 ACTTACACCT AGGAGTTCAA GACAAGGCTG GGCAACATGG CAAGACCCCG
109351 TCTCTAAAAA AAAAAAAAAA ATTAATTAGC CTGGTGCTGT GGCATGTACC
109401 TGTAGTCCCA TCTACTCAGG AGGCTGAGTT GGGAGGATTG CTTGAGCCTA
109451 GGAGGTCAAG GCTGCAGTAA GCCATGTTCA TGCCACTACA TTCCAGCCTG
109501 GGTGACAAGG TGAAACTCAG TCTCAAAAAG AAGAAGATCA CAGTTTAGAA
109551 GCAGATCTAG AGAATGACAT GTAAATAACA GATTACATAT ATAATGACCA
109601 TTGTATAAAT GTGATTTTAT ATGTATAATG ATTATATATA GTGGATATTT
109651 TATATAATTA TATACTATCA CATGTTATTA TATATTATGG CAATTATATA
109701 TATAATCAAA TATACTAAGT CTTGTCAAAG TAGTATACTC AAACTACTTG
109751 GGGGAGGGAG AATGCAAGAA TAGGAAGAGC ACATCCTGTC AGTGCTGTTA
109801 CCTTTGATTT GATTCTGATG GTTTCAGAAA GGAAGCACCT GACTGGGTTC
109851 AGTTAAATTA TGGGTTGAGT TTAGTACCTA TTAGAGGAAA GGGAAAAATA
109901 AAAGCAAAGA GACTAGCACC AAATTAAAAG TATATTTTAG GAACACCAGA
109951 CAATCCATTT GCAGTTACAC AGGGGAAAAA GTAAGAAAAA TATAATAGAT
110001 AAGGTGGAAA AGCAGTTTAT GCTTAGAATC TGGAAAGCCT TGAATGCCAA
```

FIGURE 3, page 31 of 122

```
110051 GCAGCAGAGG TGAGGGAAGG ACTCAGATCC TAAGGTGGTC TCGTGGAGAA
110101 CTGAGTTTGA CAATCTTACT TATTAGCCTC CCTTAACTGC CTTCCTTAAC
110151 TGCCTTTGGA TCTGTATTTC CTTCTTAGGA ATTTCTTGTT TCTTCCTTTC
110201 CTTATAGCCA ATATTTATTG GGCTCTTGAG TTTATGATAT GGTCCACTGA
110251 AAATCTACAA TCTATCTGTC CAATGATACT TTAACAGAAT AAAATGAAGG
110301 TTAAACCACG GCAGCTTTTC TCACTAACAT TCAATAATTT AGGTTTAATA
110351 AAGCTTCCGT GGAGTGGGGC TATTTTGTTT AGGTTTTTTA TTGTATTTTA
110401 TTTTATTTGA GACAGAATCT CTCTGTGTCA CCCAGGCTGG AGTACAGTGG
110451 CACAATCTCG GCTCACCGCA AGCTCCACCT CCCAGGTTCA TGCCATTCTC
110501 CTGCCTCAGC CTCCCGAGCA GCTGGAACTG CAGGCGCCCG CCACCACGCC
110551 TGGCTAGTTT TTTTGTATTT TTAGTAGAGA TGGGGTTTCA CCCTGTTAGC
110601 CAGGATGGTC TCGATCTCCT GACCTCATGA TCCACCCACC TCAGCCTGCC
110651 AAAGTGCTGG GATTACAGGC ATGAGCCACT GTACCCGGCC AGGGCTGTTG
110701 ATTTTATATA ATTTCCTTCC TTTTTGGCTG ATTGAAGTCC ATTGCTAATT
110751 CTAGTTTGAC ACTTTTTATT ACCTCAACTA GATTATTTTG TCCAGAAAGT
110801 TTACTGAGCA TCTTCTAGGC TAAGCACTTT AGAAAGTATG AAAGAAGTTT
110851 AATTCACAAT ACTTATCCTA AAAGATCACA ATCTTGCTGA TGGCACTTAG
110901 ACAGTACAGC AATCCCTTGA TATCCACAGG GGTTTGGTAC CAGGACTCCT
110951 ACAGATACCA ACATCTAGGT ATGTTTAAGT CCTTTATATA ACATGGCGTG
111001 GTGTTTGCAC ATAACCTAGG CACATCCTCT CACATACTTT AAATCATCTC
111051 TATATTACTT ATAATACCTA ATACAATGTA AATACTATGT AAATAGCTGC
111101 CACACTTTAT TATTTTGATT GTTATGTTGT TAATTTTATT TTTAATATTT
111151 TCAATCTGCA GTTGTGAATC TGCAAACGTA GAACCCACAG ATACAGAGGG
111201 GCAACTGTAC TCAAATTATT TGAGAGTGGT GCAAGCCCGC CAGTGAGTTT
111251 GTCACCAGTT GAGAAGACTT AAACGACTAA CTCTATAATA TAGAGATTTA
111301 TTCTGGGTGG TCAGGAAGGG CCAAGATCAT AGATAGTTAA AGATCCAGAG
111351 AAAATGGGAC TTTGAAGTAA ATGAAGGGAG GGGAAAAGAA AAATGTGCCT
111401 GAGAAATAGC ATAAGTAAAA GTCCTGAGGT ACATGGTGGA GTCACAGGGG
111451 AAAGGAAGAA GGCTGTCGGC TTGACTAAAG TGTGTGCAGG GAGATGAAGC
111501 CAGCTAGATA AGGTGGACAC GGAGGCACTG CGCACCTTGT TGCCAAATAG
111551 CGCCGGTCGT CAGAGAGTCT ACAGTGAGAG CCATCTCTTC CTGTTTGTAA
111601 TAGAAGTATG GAGTCTGGAC CCGGCGCGGT GGCTCACGCT TGTAATCCCA
111651 GCACTTTCGG AGGCCGAGGC GGGTGGATCG CGAGGTCAGA AGATTGAGAC
111701 CATCCTGGCT AACATGGTGA AACACTGTCT CTACTAAAAA TACAAAAAAA
111751 CTAGCTGGGC GTGGTGGCGG GCGCCTGTAG TCCCAGATAC TCGGGAGGCT
111801 GAGGCAGCAG AATGGCGTGA ACCCAGGAGG CGGAGTTTGC AGTGAGCCGA
111851 GATCGCGCCG CTGCACTCCA GCCTGGGCGA CAGAGCGAGA CTCCATCTCA
111901 AAAAAAAAAA AAAAAAAAAA AAAAGTATGG AGTTTGTAAG GATAGGTTTT
111951 CAATCAGTAG AAAAAGAGAA ATGCCCTCAA ATCCAGAATT TATTTAGGAA
112001 AGAAATAGCG CTTTTCCACC CAGGTTTTTG ACTGTGGAAA GTCAAAGGAG
112051 GCACCTGAAA TTTCAGACCA CTATACCCAA AGCACCTACA TACATAGAAA
112101 ATGGTGATCT CAAGCCTCAG AGTGAAAAAT GAACATCCCA GGGAGACCAA
112151 AGAGGAGAAG TGCCTGTCTG TTTCTTGCCA GGCTGGGGGG CCAAAGGGAA
112201 ACTGGGAGAA GAAGCAGAGA CACGTCTACC ACCATGGAAC CTTGCTGCTA
112251 AAAATTGATT TCAGAGTTTC CTTATGTCTC ACAGCCTGGG AACTTGAATT
112301 AAATGAGCTT TGCACAGAGA TTGCCAACCC AAAAGACCTG GGAGGTGAAG
112351 CCTTCTGTTT ATTTCAAGTT TAACTGTAGC TTCAGCTGTC AGAGCAGCAT
112401 CACATCTTGG GATCCCACCT GGAGCATCCT AGCCTCGGGG CACTTCTTTA
112451 TCTCATGAGG AAGGTGGAAG TCTGAGCTGA TCAGATGCTT GATGATGAAG
112501 TGGATTCCTC CTGAGGTAGA AACTTCCTCT CACTGGAAGT TTTCAAGTAG
112551 AGGACCACTT TGCAGGGACA TTGTCAAGAA AATTCATTCA TTCGCTGGAT
112601 GAACAGAATG ATGATAAACA GCTAACACCG ACTGAGCACA TGCTGGTGCC
112651 AGACCCTGTG TTTAGCACTT TAAGTATTTT GCTTCCTATG TCTCCATGAG
112701 ATAAGAGATG CTGTTATCCC CATTTTACAA GCAAGAAGCC AAAACCTCAA
112751 AGAGTTTGGA ATCTTACCTA AGATCTCATA ACTCATAAGT GGTAAATATT
112801 TAAACCAAGT CTGTCTGATT CTGTGATCCA TATTCTTACT TTTTAACTTC
112851 TTATTTCCAG AAAAGTGCAC TAAAGCCCAC ATACTTCACA AAGAGACTTT
112901 TTTTAATATC TTACAGCCCT GCTGTTTTAT AATCTCACTG CTAAAGATGA
112951 AGGCATTTTT GGTTTCTGAC CTTTTGCTGG GACATGAAGG TCTTGGGATT
113001 AAGGTTCATA TACTCTCACA TGTGTGAGTT TCATGTCCTC AGTGCCCATG
113051 TCTAAAAGCA AAAGTGAAAA TTAAATCAGA GCGGAAAACA CCTCTCTATT
113101 CAACACCAGA TTGTTAGGGC TGAGCTGAAA AGCTCCTAAG TAAACTAGTT
113151 CATGGCCAAG TGGCCAGAGA ACAAATTCTA GGAGCCTGAA ATGTGAGATG
113201 GGAGAGCCAG TTTGCAACCC CACCTTGTTC ACAGGATGAT TTCAGGCAGG
113251 TTCCTTAGAT GACTGAAGTT TTTGAATTGT AAGGGACCTT AGAGAGTCCT
113301 AATGCAGATT GTTATCAATT ATGCTGTACA GAATTATAGA GTTCACAACT
113351 TATTCTGCAA ATATTCATTG TGAACTTGCT ATGTGCCTAG TATTGGCCAG
113401 GAGATGCCTC CAGGGCTGCT AGAAAGGAGA AGGAGGAACA ATAGGACAAA
113451 GTTGTTCTCT CATCCTCACT TCTTTAGCTG TGCCCTCCAT TGTCTGTGTC
113501 ATGTCAGCAT TGCAGTTAAG ACTTATTTTG AAAAGGACAC TATATACCAA
113551 AGGACTATAA ATCATGCTGC TATAAAGACA CATGCACACT TATGTTTATT
```

```
113601 GCAGCACTAT TCACAATAGC AAAGACTTGG AACCAACCCA AATGTCCAAC
113651 AATGATAGAC TGGATTAAGA AAATGTGGCA CATATACACC ATGGAATACT
113701 ATGCAGCCTT AAAAAATGAT GAGTTCATGT CCTTTGTAGA GACATGGATG
113751 AAATTGGAAA TCATCATTCT CAGTAAACTA TCGCAAGGAC AAAAAACCAA
113801 ACACTGCATG TTCTCACTCA TAGGTGGGAA TTGAACAATG AGAACACATG
113851 GACACAGGAA GGGGAACATC ACACACTGGG GCCTGTTGTG GGGTGGGGGG
113901 AGTGGGGAGG GATAAGCATT AGGAGATATA CCTAATGCTA AATGACGAGT
113951 TAATGGGTGC AGCACACCAG CATGGCACAT GTATACATAT GTAACTAACC
114001 TGCACATTGT GCACATGTAC CCTATAACTT AAAGTATAAT AATAATAAAA
114051 TAAAGAAAAA TAAAATAAGA AAAAGACACT ATATAGCTTG AATTGCTCTT
114101 AGACAGCAAT GTTCTATTCT AACACTCCCA TTTGATAGAT GATGAAGCCA
114151 AAAAAGATAA AGTAATTTGC CCAAAGTCCA GCCATCGTTG CTAGCTAGTT
114201 GCCACTTTAC CCCAGTACCT CCTACAGCCC TGGGCTACAG TTCCCACATC
114251 TCTACGATGG AGGAAGGGGA ACAGACTCTC TCTAGCAGTC TTTTCCAAGG
114301 CCAAAGTGTT TTCATTTTCT GAATTTCTTG AACATCCACT GTTTGGCCAG
114351 TATTGTCCTT AGCTATCTAA TAGTCACAAC CCTTAAGTTC TTTTCTTTCT
114401 GTCCCTCGTG CCCTTTGTCT TCAGGCTGGT AAACTGTCAT AGATATTGAT
114451 CTGAGCTTTG TTTAATCATG CTAAGCTTAT ACCATGGGTC CCAGGGAAAC
114501 TAGGAAGATG AACAGTATAT AACAATTACA ATTAACTTGT CATTTAGCAT
114551 TAGGTATATC TCCTAATGCT ATCCCTCCCC TGTCCCCCCA CCCCACAACA
114601 GTCCCCAGAG TGTGATGTTC CCCTTCCTGT GTCCATGTGT TCTCATTGTT
114651 CAATTCCCAC CTATGAGTGA GAACATGCAG TGTTTGGTTT TTTGTCTTTG
114701 TGATAGTTTA CTGAGAATGA TGATTTCCAA TTTCATCCAT GTCCCTACAA
114751 AGGACATGAA CTCATCATTT TTTAAGGCTG CATAGTATTC CATGGTGTAT
114801 ATGTGCCACA TTTTCTTAAT CCAGTCTATC ATTGTTGGAC ATTTGGGTTG
114851 GTTCCAAGTC TTTGCTATTG TGAATAGTGC CACAATAAAC ATAACGTGTG
114901 CATGTGTCTT TATAGCAGCA TGATTTATAG CCCTTTGGCT ATATACCCAG
114951 TAATGGGATG GCTGGGTCAA ATGGTATTTC TAGTTCTAGA TCCCTGAGGA
115001 ATCGCCACAT GTGCCCTAAA ACTTAAAGTA TAATAATAAT TAAAAAAAAA
115051 CAGTTACCAG TATTTATTGA GTGCCTAAGG TAGTAAAGGC TTGAGAAGCT
115101 GGAGCCTATT TTCATACCGA ATATGTAAAT ATCGACATCT CTGCTCTAGA
115151 AGATCTAGGA CACTCTGGAA AAGTGTCTGT ATATCTTATA TTAGGAGTAG
115201 TGGCCTCACC AATGTGGTGT CATGGTTAGT AAAGGACAGG CTGAGTGAAC
115251 AAGAAGGGAC TGATCATGTC TTTGCCAGTT GCCACCGCCT AGCTACGTTC
115301 TTGGGCATGG GACCTAATTT GTCCAGCCTC AACTTTCATC TGTGTGACAG
115351 GTCCAATAAT TCCCCATACC ACAGGGATGT TGTGATGATT AAATGATAAG
115401 CAGAGATTTT AGTACAGGAT TGGATATATA GTAAGCTCTC CATAAATGGT
115451 AATACTATTA CTATACATAT ACATGTATTT TACATACCTA TATATATTTA
115501 CATACATTTA TGATCTAGTT TATAATCTCC AATATGCCTT GGAAGCTTCA
115551 GAATGAGTCT TATTTCATTT TTGTAATGTT ACTATCATAC ACAGCAATAA
115601 CAGAAACAAG TTCTAAAATT TCTCCCTGGA GCTTTACTTC AGGAGTTTGC
115651 TACCAATTAG AGGGGTGGGG GGAAGAGGAA GAGATGGGAG AAAGAGAATT
115701 TCACCTGTTT TAGTCTCTAT ATACAAATAA AGTGGGTGAC CCCTAACTTT
115751 GCCAAGCTCT TGCCTCAGAA TGAAACCACA CCCAGTGCCT GTAACTTCCT
115801 AATCAAACAC GTGAGTTACC TTCAAGGGTT ACAAAATCAT AGTTCATGGA
115851 TGAAATATGT GTGGCCCAAA CAGAATTCTA ATTTGTTAAA AAAAACAGTT
115901 GCTAACCTTT CAAAATACAA GAATTTCATT TGAAAATCTA GGTTTCTGTC
115951 TTCTCACTTA CTTTTAACTT TCTTAATCTG ACCTACATAC TCAAGGCAAA
116001 ACTATATAGC ACACTGTTTT ATCACAAAGG TAACACTCAG CCAAGTCAAG
116051 AATTGTAGCG TTGTCAGCCC CCAGGAATGC TCTTGTGCCC ATCCCTAGCT
116101 CTATACACTG TCTCTCCAAA CAGAACCTCT ATCGGGATTC ATCATAACAT
116151 CCTTGTTTTT CTTTAGAACT TTACCACCTA AGCATGCATT TCTAAATGTT
116201 AGAGTTTAAT TTTGTCTACA TTTTGGAATT CAGAATATAC TCCTGACCTC
116251 ACGGTAGGAA AAATCTTCTT AAACAAAATA TAAAACCATC CATAAGGAAG
116301 AAACTGATAA ATTGAACTGT ATTAAAGTTA ACAGTTTCTG TCCTATAAAG
116351 CAGGAGATAC CATTAAGAGA GTGAAAATGC AAGCTACAGA AAGGAACACT
116401 CACATTTAGA ATACCTAAAA TCAGTTTAAA AAGAGGAGAG ACAACCAAGT
116451 AGAAAAACAG GCAAAAGGTG GCCAGGCGCA GTGGTCAGGA ATTTGAGACC
116501 AGCCTGACCA ACACGGCAAA ACCCCGTCTC TACTAAATAT ACAAAAATTA
116551 GCCAGGCCTG GTGGTGCACA CCTGTAATCC CAGCTACTAG GGAGGCTGAG
116601 ACAGGAGAAT CGCTTGAGCC CAGGATGTGG AGGTTGCAGT GAGCCAAGAT
116651 TGCACCACTG CACTCCAGCC TGGGTGACAG AGTGAGACTC TGTCTCAAAA
116701 AAAAAAAAAA GAGATGAGCT ATTAACACTT AAAAAGGCAC ATCAACATTT
116751 CAATAAGCAT CCAGTATGTA TTTATGTGTG TATCTGTTTA CGTTTGCTTA
116801 ATATAACACT CATAGGATTC ATCCTCATGA TTGTAGATAG GTGTAGTTTA
116851 CTCATTTTCA TTCCTGTATA GGATTCTATT GTATGAGTAT GCCAAAATTT
116901 ATTCATCCAT AATTCTACTC TTGATGGACA TTTGGGCCGT TTACACTTTT
116951 GAATAATGAG TCTATAAATA TTCTTGTATA TGTGTCTGGG TGCACATGTG
117001 CACATATTTT TTGTTGGATA TAAACCTGGG AGTGTTATGT GAATGTTCAG
117051 CTTTAATAGA TACTGCCAAA TAGTTTTTCA AAGTAGCTGT ACCAATTTAC
117101 ACTCCCACCA TCAATATGTG ACAATTCCCA TTGCTCCAAA TTCTCTCAAA
```

```
117151 CACTTGGGAT TGTAAGTCAT TTTAATTTTA GCCCTCCTGG TGGGGGTGTA
117201 GTGATAACTC ATTGTGATTT TAATTTGTAT TTCTCTTGAT TATTTGTGAG
117251 TTTTAACTTC ATTTCATGTG CTTATTGAAA TGCTGATATG CTTTTTTAAG
117301 TGATAACAGT TAATACCTTT TTTAAAAATT GATTTTAGGT ATTCTAAATG
117351 TGAGCCTTCA GTCAAATGTG TATGTTGCAA ATATCTTCTT CCTTTCCATA
117401 GCTTGCATTT TCACTCTCTT AATGGTATCT CTTGCTGTGC AGGACAGAAA
117451 CTGTTAACTT GAATGCAGTC CAATTTATCA GTTTCTTCCT TATGGATGGT
117501 TTTATATTTT GTTTAGGAAA ACTTTTCCTA CCCTGAGATC AGGAATATAT
117551 TCTTCTATAT TAACTTTTGG TGGCCTTATG TTTTTCCACT TAAATTAATG
117601 ATCCATCTGG TACTGATTTT TATTTAGGGT ATAGTATAGG GGTCTAGAAT
117651 CAATTTTTCT ACATAGATAT CCAGTTGTCA GCATCATTTA TTGAAAAGAT
117701 CACCTTTTCT CCACTAAACT TCAGTGGCAT CTTGGTCATA AATCAAGTGA
117751 CCAAGTATGT CTGGTTCTGC TTCTGGTCTT TCTTTTCTGT TCCACTGGTT
117801 TGTTTATTTC TCAGGTACTT AGATTTAAAC TGAGCCTTTG TATCTGGAAC
117851 AGGAAGCTTT TCCCCTTTTT CAAAATTGTT TTGGCTATTA TTAGACCTTT
117901 ACATTTACAT ACAAATTTTA GAACCAGCAT GTCACATTCC AAATAAAACC
117951 TACAGAAATT CTAATTGGGA TATAATTTAA TTACAATCAG TTTGGGAGAG
118001 TTGATATCTT TACAATATTG AGTCTTCAAA TCCCAGAGCA TAGTATATTG
118051 CTTCAATTAT TAAGATCTTC TTTTATTTTT TTCAGTAATA TTTTGTAGTT
118101 TTCAGTACAG ATCTTTTGTT AGATTTATTT TGTAGGTATT CAATGTTTTT
118151 TGATATTATA AAAAGTGTTC TTAAAATATT ATGTCATAAT TGTTTGGCGC
118201 TGGTAAATGG AAATACAAAT GATTAATTTT ATATTGATTT TATGTCTCGT
118251 GACCTTGCTA AATTCACTTT TTTCTACAGT TTTTCTTTCT GTGAATACAG
118301 TCATGTCATT TATGGGTAAT GAGAGTATTA TTTTTTCCTT GCCAACTTGA
118351 CCATAATATC TCCTTATTCA GTTTGTTAGT ACTTTAAGAT GTTTTTCATC
118401 CTGATTATGA AATAATAAAG TATGTGTAAT TTTCTTTTCT TACAATACCC
118451 TTGTTCAATT TGGTATTCAG GTTATGCTGA CCTCAGGAGG AAAATAAGGC
118501 AGTGCTCCCT CTTCCCATTC TTTAAAAGAA TGATATAAAC ATATCACAAA
118551 AGATATATAT ATATATATAT ATATATATAT AATCACAGTT TCTTTATCCA
118601 CTCGTTGATT GATGGGCATT TGCATTGGTT TCACATTTTT GCAATTGTAA
118651 ATTGTGCCGC TATAACATGC ATGTGCAAGT ATCTTTTTCA TATAATGACT
118701 TGTTTTCCTC TGGGTAGATT TATAATCTCA CCTTCTATAC TATTGACATT
118751 GGTGGATTTT TTGCTTGGTT GCTCTCATAT TTTCTCTCAA ATTATTGAGG
118801 GGTTGGTTTT GACTTTGTTT ATCTTGTCTA TTGTACATTT ATTTCATTAA
118851 CTTCTACACT TTATTTACTT CTTCTTTTCT ATGTTTAATT TGCAGGGCTT
118901 TTTCCTGACT TCTTAAAATG GATGCTTGGT TCATTGATTT TTTTCATATC
118951 TTTTCTTCTT TTCTAATATA TGCATTTGTA AAGCCTTGCA TTTCTCTCTA
119001 AAGATAGACT TAACCACATC ACTATTTTCT TGGCTTGTTT CAGATTTACT
119051 AAATTTTAAA TTTTTTTGAC TTTTTACTCC TGTATTAATT TGAATATTAG
119101 GCACCCCTTA ACTGTTCTTC TAGTGCTTAC ACTGATGATT GCAACATTCA
119151 TTCTTGGCAT ATCAAATGTT ATTGTAATTG CCACTTACAC CCTTTTCCCA
119201 GATGGTACAA AGACCTTGAA TACTTAGTTT TATTTATTTA ACTGCTAATG
119251 TACATGTTAT TATTGTTGCA TAATTTTTAT ATTTTTACAG TCGACAATAT
119301 GGTATTATTG TTGTTGCTGC TCTTTTATTC AGTCAGCATT ATTTATATTT
119351 ACCCATATAT TTATAATTTT TATTACCTTT TATTCTATTT GTTATCTCAA
119401 AGTTTCCATC TGGAATAATT TTCCTTCTTT GTGAATAATA TCATTCTGTA
119451 TTTCCATTAG TGTGGGTCTG TTGTTGACAA TTTTTTTTCT TTTTCTTTGC
119501 ATCAAAATGT CTTTATTTTA CATTCTCTAT GGAAAAAAGT TTTTGTTGGA
119551 TATGTAGTCT ACATCACAGT TATTCTCTGT CAGCACTTTA AAGATGTAAT
119601 TTAGTTGTTT CTTGTGAAGG GTCAGCTGTC TGCTTTATTG TTGATCTTTT
119651 GACAGTAATC TGTCTGCCTT TGCCCCACTT CCAGGTACAG AGTTACTGTC
119701 TTTGGTTTTC AGCAATTTTG CAATATTCTG GTTAGTTGCG ATTCTTTTTT
119751 TTAATTTAAC ATCATTTGGG TACATTGGAC TTCTCAAATT TGTGTCTTGA
119801 TGTCTTTTGT CAGGTTTGGA GAGCTTTTGG CAATTAATTC TTCAGACATC
119851 ATTTATGTGT CCTTCTTTTT TCACTTTATG AAATTTCATT TACAATGATG
119901 TTAAGGTGTT TCACTGTAAC CCACATTCTT TTCCATATTT TCTATCATTT
119951 TCTCTTTATA TGTTTCAATC CTGTTATATT CTTCTGATCT ATCTTGATGT
120001 TTGCTAATTC TCTTTTTGGC TGCACCTAAT CTGCCATTGT TCCTGTCTAT
120051 TGAATTTTAG ATGCCAGTCA TTATACTGTT CAATTTTGGA AAATTTTTCG
120101 TGGTTCTTTC ACATGGTTTT CAGTCCTCTG ATAAAATTAT CAATCCTTCA
120151 TTTAATCTCC TGGGAGATAG TAAGCATAGT TGATTATGAA ATTTATGTCT
120201 GTAATGTCTG ATTACTCTAT TATCTTGAGC CCCTGTGGGT CTATTCCTAT
120251 TTTCTCTGCT TTTCTGTTCA TTTTAATTTA TGTTGTCTTA TCTTCCTGTA
120301 TAACAGTTTT TTTTTACTGC GTTCTGGACA TTGAATTTGC AAAATTTCTT
120351 TGCAGAAATA ATTTGAGGCC TAAGCTGATG TTATCTTTTT CCCTAGTAGA
120401 TATATGTTTG CTTGCTGCAC TAGTACTCCA TTATCAGGTC AATCCAATTT
120451 CAGGGATTGA GATGATTTGA AGCTACACTG CAACCCTTAC TAGTACCTGT
120501 CTATTTCCAG TTCAGCCTTA CTCCTATTGG GCAGCCCTTC TGAGTCCCAG
120551 CCTAAAGTTG GGTTTAACAA GCTTCCCCCA CTGCAATCAC CATATTTTGG
120601 TCCTGGACTC CAAATTTCAT CTTTCTATTT CTGGCAAGCT CTTAAATGAG
120651 CTTCCTCTTA GTTGTTTAGT TGCTTACTCT AGAATTAGTA AATATCCCCA
```

```
120701 AGGTGCAAGC AGCTCCAAAC ACAAAGGTTA CCTCCCGGGC TTCCTCCATC
120751 CTTAGATCCC AGCCCTGCTA TTCTTTGCTC TTTTGTTAGC TCTCCTACAT
120801 CTTCAAGTAG ATTTGTAAAT ATTTTGCCCA GCTTTTCTTG TTGTTCTCAT
120851 TGGGAGTATT CGTCCAAATT ACATAGTCTT TCATTAACAC AAGAGGAAGT
120901 CCTGTTCCTG ATCTTGAAAA AAATGATAGA TATGTCCACA ATAGGCTGAA
120951 ACAAGGCAGT GATTTCTCCC TTCATATGAG GAATACATTC TCCCACAATG
121001 TCCAGCTAGC CTCCTTCTCA TTCACCTTAG CCCAGTGACT TTGGCATTTG
121051 GGATTCAGAC TCTTTTCCTT TTTTTTTTTT TTTTTTTTTT TGAGATGGAG
121101 TCTTGCTCTG TCACCCAGGC TGGAGTGCAG TGGAGCAATC TTGGCTCACT
121151 GCAGGCTCCA CCTTCCGGGT TCAGGTCATT CTCCTGCCTC AGCCTTCCGA
121201 GTAGCTGGGA TTACATGGCC CACCACCACA CCCAGCTAAT TTTTGTATTT
121251 TTAGTAGAGA CGAGGTTTCA CCATGTTAGC CAGGATGGTC TCGATCTCCT
121301 GACCTTGTGA TCTGCCGGCC TCGGCCTCCC AAAGTGCTGG GATTACAGGC
121351 ATGAGCCACC GAGCCCAGCC CAGACTCTTT TCTTAAATAT TCCAATAAGG
121401 TACAATTTGA TCATCCTAGG TTTCTTTCCT CTAAGTCTGG CATGATATGG
121451 TTGGTAAATG GAGGTTAACT ATTTTATTAT TTTGCTAGAG AAGAACTCCT
121501 AAAGCCCCTA TGGGGTTGGC ATCATTCTAC TGTCTGCATG CCTGGAAGAT
121551 CTAAAATATT TAGTGGGCCC AGAACTCCTC TATGAGGACA GATTGCCAGA
121601 CTGCTTTGCA CTGCAGAGCC TTTCAATGGA AAACTGGATT TCTAGCCTCA
121651 GTTGTGATGT GAGACCAGGA CAGTGTTGAA TGGAGACTAA AAATAGGGTG
121701 ACTTACAAAC AGATAGTGTG TATCTCCCAG GGAGTGTGAA GTCCACTTTC
121751 CAAAGCAACT GCCAGCATAA GGAGTGTTAA TGCCCTCTGG GATCCAAGTA
121801 GGATGAAAAC AAACCACAGA AAATGAGGTA GGATGTTCAA CTCTCCCTTT
121851 CAGTGATCAG GAAATCTACA TGCTCATAGA CTGGATTATT CAGAATAGAC
121901 CTTGTTGAAA GTTACTGGAA TGGAGGAAAA CCCTACAAAG ATTTCCAGAT
121951 TCCCTGGGGA AGACAAAAGT ATTTGGTCTT TGTTGTTATC GTTGTTGTTG
122001 TTTAAAGTGA ACTCCTGTCC TTTGCTCTAA TTCAAGGAAG AATTTCTGAG
122051 TATAGCTACT CTATGCAAAA TAATCTCTGC CTTTAGGGCT TCCCCTAATT
122101 GTGGTCGAGA GTGTAGTCTC CAGAGTCAAG ATGCCTAGAT TTCAATCCTT
122151 ATTCTACTAT TTATTAGCAT TGTAACCTTG GGCAAGTTAT CTAATTTCTC
122201 TATGTTGCAA TTTCCCCATT TATAAAATGG AAGTAAAAGT GCTACTTTAT
122251 CTCCAAGGGT TTTTGTGAGG ATTTTAAAAA GTCATGCATA TAAAGTATCT
122301 AGAACAGTGT CTGGCACATG GAAAAACTCA AATAAAAATA GCTATTTATA
122351 ATTAATTTTG TTTTAGTATT ATAATTGTAT AGTAATGCTC AACACGTTTA
122401 TCGTGTGTCT CTCAAAGCCC TGGATTTCTT ATCTCAGTTC TGCACTCTTT
122451 CATTTAAAGT TCTGAACAGG CTGTCTTCAA CCTGGTGGAT GGTTCAAACA
122501 GGCTGTCCAA CTTTCTTAGT TGGATATGGG GATTTCCAAA TCTTGCTGCT
122551 CATTTCAGAA AGCTTTTTGA AAATATAGAC TCCTAGGATT TGCCCACAGA
122601 GATTCTGATT TAGTAGATTT GGAGTGAGGC CTAGGAAGCT ATATTTTAAA
122651 AAGCTTGCCA CTACGTATAA TATGCAACCA ATTTGGAATG ACTGAACTAT
122701 GATGACCTGG TACCAATTAT TAAATATATG GAGCCAATTA TTAAATATTC
122751 ATAAATTTTG CAAACTGATT GTTAAACCAT TAGTAGTTAT TAGCTATGGT
122801 AGGAATATTT ACACCATGGA AACTGGCAAA TCCTACATTC TTTTTTTCCT
122851 GGAAAGCTGG TTTACTGTCC CACCACTGGC ACAATCTTCT TAGCCCCTGG
122901 GATCTGGAGT ATCTCTGTCT GAATCTCCTT TGGTTAGAAC TTTACATCTC
122951 CATGATTTTC TGTTCTCTAA TTGAGGTTTT GATCTGCCAG GCAGTAGATA
123001 TTCCTGTGAC TGAAAGGGCT TCCAGCTAGA TATCTCTGCA GCCATAATCA
123051 AGCTCTCCAT CATTGCTTTG TTTTGAGGCA GAGGTGGAAA ACTGGTGGTC
123101 AGTGGTGATT CTGGTTCACA GATGCATAAT TGTTGGCTCT CACGAAGACT
123151 TAAAATTAAA GTCGGAGGCA GCTTTTTAAA AAATTATAAG ATGGCATATA
123201 AAAATCCAGA TTCTCACCTT CTCTTTCAAA AAACAAACAA ACAAACAAAA
123251 ACTAAGTTGA AAGAAGATCT GGACCTGCTT TTCAGTGGAC AAAGTTCAGC
123301 CAAAGCTACG TGAGCACTGG CAGGGGAAAG GTGTTCTCTC ACCGGCTCAT
123351 TTGTTCATTT ATGTTTTCCG CCTGGCCTTG AGCTTGCAGC TCCTCTGGGA
123401 AGCAGTGTGT TCTGTTGGAA AAGGTGCCAG ACTGGGTCTT TGGAGATGTA
123451 GGTTTGTAAT CATGACTCTG TTTTTTAATT TATCGTGTGA CCTTGGTCAA
123501 GTCATTCTCC CTAACAGAGC CTCAGTTTCT CACCTGCAAA CTAGGGAGAA
123551 TGCTTGCTTT GTCTGCCTCT CCAAATGTGA GATGGGGAAA TGTGAGTCCT
123601 TGACCACCAG CTGTAGAAAA GTAAGGAATT ATTGCTAAAT ATTGATTCCT
123651 ATTTCCTGCC ATTGGCACCT AGGTGGGAAT GAATAATCCC AGAACAGGTT
123701 CTGATAGGAG AAAATATTTG AATAGATAGG AGTGCTGAGA AGGGATAAGG
123751 AGAGAGTGCC TATAATGAGA AAAGTGCACA AAACAGAAAT ACTAGTGAAT
123801 ATGCTGAATC TACAGTCTTC TTAAGGGAAA TTTGGGAACA TGAGAATTTG
123851 AAGTTGATAC TATTAACCAA CCTCATGTCA CATATAAGAA AATATGGGCT
123901 TGGAAATCAA ATCTGCACAT AAATTCCAGA AGGCTATGCC TTTGTGCAAG
123951 TTAACTTATC TGAGCCTCTG TTTCCTCATG TATACAAGGT GGATATTAGA
124001 ATCTATCTTG CAATGCATTG TGAAGATTCA GTGGGATAAT GCATATTAAG
124051 TGCCTGAGAT ATTTTGTGAA TGTCCAATAA ATGGCAACTG CTGTTATCAG
124101 CTCAAATCAG GCATATGCAA ATTGAACTAC TGGCAAATAG GGAAGTAGTT
124151 AGGAGAATAT GATGTATTGT TAGTGGATAT TTCCTTATCA GAAAAGAACT
124201 TTGCATAATC CGTAAGGGAC TTCTTCTACT TCCCATTCCA CTGAAGAACT
```

```
124251 TCAATTTAGT ATTTTACCCA GCATTTGCTG CAAGCTTCGT AGGATACCCA
124301 GCCACACATA CCCATATCAG CAGCAAGTTC TGAGAGCCAG CGGCAGTATT
124351 AGCATTATAA AGTGTTTCCA GAGTTGGACC AGTGTGTGCT TCCCCTTCAT
124401 AAATCCTTAA ATCTTAGGCT CACTCAGCTG GAAAAAAAAA AAAGAAATCT
124451 GGGTTTGAAG AACACTTATT TATTTTTGAT TTTCTCTGCC TTGTGTGCTT
124501 CTTTTGACTG CGCATCTGAA TATCAAGGCA AGAAGTGCTC AAGTTCCTCT
124551 GGGCTCTGGA AGGCTGGAAC CAATTGGTAT TCTTGGAGTC GGTCCTTTTT
124601 GGACTAAAGC TCCTTTTTCT TTTCCTCCCC CCAATAAAAA TTTCTGTTCC
124651 AGGGAGTACT TTCTCAGTCA CTCCTTTCCT AATGTAATTC TGTTTGATTT
124701 CCACTGAACG GCTCCTGAAA GGAGACACTG AACCATGCCT CCACAAGCAT
124751 TTCAATTCCT CAACACCAGC TTTCAGGCAG GAGCAGTTCC AGATGCATTT
124801 TTATATCCAG TAATCATGCA TTTAACCAAA ATGATTGATG CAGCATTTTT
124851 TCCCCTCTCT ATCATTTCCA GTCCATTAGT CTTATTTGTT TTCCATGGTT
124901 TGGGTTCCTG CCAAATCAGT GAATATACAA ATACTTGCAT AAGTCATGCA
124951 CATCTACACA CACATACATG TAATAGGTAC TGGGTCTGTA TCTGAGTTGA
125001 ATATTCAACA TTTTATTTCC AGGCTTCATG TCTCCACTGA AGTTTTAGCC
125051 GCTTCTTTCC TTCTTTCTTA CTTCCCTCTC TCCCTTCTTT TTTTCCCTCT
125101 CTTCCTCTCC TTTATAGTCT ATTAAGTTGG TGCAAAAGTA ATTGTGATTT
125151 TGCCATTACT TTTAATGACA AACCACAATG GCTTTTGCAC CAACCTAACA
125201 CTTTTCCCAG AAACAGCCAC TTTTTTTTTT TTGTCAGCCA TCATAGAATC
125251 TGATATTCTT CAGCGTTAAA GGGGCTTGAG AGAGGCATTT ACATAATCCG
125301 TTCACTTTAG TTTCAGAAAA TCAACAGGCC AGAAAGGAAA CCATGTGCCA
125351 TCCCAGGCTT TCCTTGGCCC TTAGGCAAAC ATTCCAGTGC CACGTCCCCC
125401 ATCAGCCCTT GCACGCCCTG GACCCTGCCC GCTGCATCAG CCACCTCTCC
125451 ACCTCAGTCT TCACACTGAC CTCTCCACTT CAATCTTCAC GCTGTAGCCA
125501 CACAGGCCTT TAGTCCTTGC CTTGGGGCCT TCACACCTGC TTCTCTCGCT
125551 GCTCGGACAG TTTTTCATAC ATAGGTGCAC ACACCTTCTT CACTGCTCCA
125601 CCTCCTATTT ATTCTTTAGG TCTCAGCTCA AATGACACTT CTTAGATCAC
125651 ACACCATACC ACCCTCTCCT GACTTTCCAC CCTTTCTCTT CTGACACTTA
125701 TTACGATTTG TAATTTTGTA TTTACTTGGG TATTTAGTTG TTTAATGTAT
125751 CTTCACTTAT TAGAAGACAA GCCCTATAAG GACAAAGACC ATGTTTTCCC
125801 CGCCCCTCAA TTGTTTCCTC AGTGCCATAG ACAGTGCCTT GTGTTTGATA
125851 GTGACAATAG TTAGCAATCA TAAAGTGACA GTATCTAACA TCTGTTAAAA
125901 ACTTGCTAGT TCCAGGCACA GTGTCCTATG ATTTTTATAT GTATTTACTC
125951 ATTTAATACT TACAACAATT ATCCCGTAAA GTAGGTGTGA TTATTATCCC
126001 CGTTTTGCAA ATAAGGAAAC TGGTCAAGTC ACTCACCCAA GATTATATGG
126051 CTGGAAAGTG GCAGAGTTTG TTTGTAACCC AGGCATTGAC TCCAAAACCT
126101 GAACCCACAA CCAGGCCATG CTACTCCTGT TAAGCACTTC ATTAATATTC
126151 ATTGAGAGAA TAAGTGAAAA ATATACCTTA ATCAATTAGT AGCAAAACTG
126201 AAAACCTAAA TTGTTTGATT GATAAGCCAT TTCTCTTTCT ATGCAAACAG
126251 AGAGCCTCTC AGGTACCACC AGAATGCAGC AGAAAGAAAG AGAAGATTAA
126301 CAAATTCATT TATTGCTGAT AAGAACTATG AGAGGGACGC TGTGATATAG
126351 ATCATGAAGT GAAGTGGAAA TTATTATTTT AGATTCAGGC AGGACCCAGT
126401 GGCAGGTGGA AAAAATACAG AGTCAATTGA AGAGGCCTTA AGATAAGGAA
126451 TCAGATTCTC CAGAAACATC AAGTGGGTTT ACAGTTATTA TCATTAACAA
126501 TTTAGGCAAT TCTTATGCTA TGGATAACAT TTTCCAAATG TGATTTTAAA
126551 GTATGAGTAA TCATCAGTTT TATGAAACTG CTGCTCAGAA TTCTAGGATA
126601 AAAACTCCAA TAATGAGCCT TGTTCAGTTG TTCCATGGCA TGTGGAACAG
126651 TTCCTAGCAC ATATAAGCAC TCAACAGACA TTTATTTAGT AATTAATGGG
126701 AAATGAACAT CAACAAATCC ATCAGCAAAT ACTTACTAAG TACTCGTTAT
126751 TAAGTCTATA CAGATCAAGG CACAACAAGG CACAAAAGTA AAATGTCAGA
126801 TTTCTTTTCA TGGAGAGCTC ATAATCCAGG TAGACCCAGA AATAACCACC
126851 ACAATGAATA AAAGCTGCTA GCTGGGCATG GTGGCACATG CCTGTAACCC
126901 CAACACATTG GGAGTCTGAG ATGAAAGGAC CGCTTGAGAC CAGGAGTATG
126951 AGACCATACT AGTCAACATA GTAAGGCCCT GCCTCTACAA AAAATTTTTA
127001 AAAATCAGCT GAGCATGGTG GCCTGTGCCT GTAATTCCAG CTTCTCAGGA
127051 GACTGAGGCA GGAGGATCAC TTGAGCCCAG GCGGTCAGGG CTGCAGTGAG
127101 CTATGATTGC ACCTCTACAT ACCAGCTTGG GCAACAAAGC AAGATCCTGC
127151 CTATTAAAAA TTGTTGATAA AATAAAAAAT AAAAGTAAAC GCCACCATCA
127201 CTGGGGAGTT GCTTTGTCCA GGGGCTCTGC CATGTCCCTC TGCATATATT
127251 AGGTCATCTT TATACTCGTA ACAACTTTAA GATGATGGTA CCCTTCCTCA
127301 TCCCCATCTC TAGATGTTGA AACTGAGGTT TAAAGATGCT AATTTCTGTC
127351 CTAAAGACAC AGAAACAAGA ACTTAGTGCA GCCAGGATTT GAACTCAGGT
127401 CGGTTTGAGT CTGGAACCAA TGATGCCAAA TGTCTTCATC CCTTTATTTT
127451 GAAAGCACTA TCTGTGGGTG AGGCATACTA GAACTACAAG ACTTTGCAGT
127501 ATCAGAGGAT GGGAGTGGCT ACAGAGGGAT CAATGAAAGC AACATTACCC
127551 AGTCTCTCCA GGTCTGCATA TCCTGCTTAC CTGGGTATGA AACACTCCAT
127601 CTCTCACCTG CCACAGTCCT GTCATTCAGG TCCCAGATTC AGTATCACTT
127651 CTGCATATGC TGCTTACTTG GGTATGAAAT ACTCCATCCC TCACCTGCCA
127701 CAATCCTATC GTTCAAGTCC CAGATTCAGT GTCACTTCTT CCTGGAAGGC
127751 TTTTCAAACA TGGTACAATT TGATTGTTTC TTCCTTTATG CTCCTTTTAG
```

```
127801 AATCCGGTGT GTTTCCTGAT TATAATTCTT ATCTCGCATT CTGATTACTT
127851 GTTTCCCATT AACTAGTCTT TGAGTTCCTC TAGGACAGGG GTGACCAATC
127901 TTTTGGCTTC CCTGAGCCAC TTTGGAAGAA GAATTGTCTT GGGCCACACA
127951 TAAAATACAC CAACATCAAT GATGAGCTAA AAAAAAAAAT TCGCAAAAAA
128001 AAAATCTCAT AATGTTTTAA GAAACTTTAC ACATTTGTGT TGGGACATAT
128051 TCAAAGCCAT CCTGGGCTGC ATGTGGCTCA CAGGCCACAG GTTGGACAAG
128101 CTTGCTCTAG GATACAATTT TATTCTCCCA GGGCCTAGCA CAGCCCCTAG
128151 CATATAGTAA GTCATTTAAT AAATAAGTGT GGAACGAATG AATTTTAGGT
128201 AGAAATTGTC ATCAGATGGT TCAACTAATA TACAGCACAA TTCCAAGAGA
128251 GGAGTGTATT CTTGGGCATC AGGGAAAAGG GACTTTGGAA AAGTTGAGTT
128301 GGAGGCCATG TGGCTATTAA GATATCTGTC TCCACATGCC TCGACTGACT
128351 GTGTGAGCCT TGGAAAGTTA TTCTCTCTTC ACTTCAGTGT TTTCATCCTT
128401 ATAATTAAGA TGATAAAAAC TGGGTTGTTG GGAAGTTGAA ATAACTTAAC
128451 ATGCAGGAAC TCAGCAGAGT GTCGTTCAT TGTAAGTACT CAAATGTTGG
128501 CCATGGCTAT AGCTGCTGCT GCTTGTCTTC TCTGAATTAT TATTATGGAA
128551 ATTTGGGTGA GTACAGCATT TCAGGCAGCA GGTCACTTCT GAGTAAAAGT
128601 ACAGAACTAT GAAGAGATCT CCTACCCTTG GATATAAAAA CAATTCACAG
128651 CATTGCCAAG AAAGACTGTA GATATTCAGG GATGAGAGTG AGATTCCTAT
128701 GAGCCAGAGA ATCAAAAGCT CTGTAAATTA GTGAGTTCGT GATATCATGC
128751 TACGCTCCTG TTTTTAAGAG CTAGATATCA AAATAAATGG TCCAGTGTAT
128801 GTGCCTGATG GCTATGTCTT TTCCACTGTA CACACAAGTA AGATTCTGCA
128851 TGGTGACTAT CATTTTGTTT TCAGGAAGTA GATGAATCAG CCGTTTGGTT
128901 CCCTGGGAAT GTGGGCTGCT GGCTTTTAAT TCTTTTTGGG GAAGATTTCT
128951 ATGTCATCAG CCATCTTGTT TATCTGGAAA CATGGGACAA ACGTTGGCTC
129001 TCTTTCTACC TATGTAGTCC TTTGCTAGGG TTGTACAGCT TGAGTAGAAT
129051 TGGGAAAAGT GATTTGGATC CTTGTGACTG GGATTAGGGA GAATTGGTAC
129101 ATGAGTATAC AGAATCTTTT CATTGATCTC CTTGCCTCTG ACCTTGATTT
129151 AGCCACCTAC TTTCAGTGGA TAAGGCCCTA CAGAACAAAC CAACTGAAGC
129201 ATACTTTAGG ATAGGCCACA CCTCTAATCT CATATTTATT ATGACCAACT
129251 AAAAACTGCT TATCCTTCTC TTTATGTCTA TTATTTAACT TTCCCCTCCT
129301 CTCTACCTTC TTTCCCTTAA GTCCTTCTGA TACACTACAT GCTCCTGCCA
129351 TTGTGACTAT GAGTCTAAAA AGCTGGTGGC ATTACCCACC TTCCCCTCCA
129401 CCTTCAAAAC TCACATGTAC ACCATGCTTT GGGCTTCTCT GATTTGGCTC
129451 ACTATTTCTT CAACTTAGAA CGCCCACTTT CTATTATGAT CATTAAAAGA
129501 TCCTGGATTT ATGTGTGGGG TGGATGTAGT AACAACTGGG AAATAGCATA
129551 AAATTATTTG GTTTCTTGTA TGCTGGTTTT CTTCCCAGAG GTAACCTGTT
129601 TGGTTTGACG TTTGGCTTAA TGTTGTTAAT TTGACGAAGG TGGAAATGGA
129651 TGGGCTAGAA ATCTTTGTGG GACTAGGATA AGGCTTGAAT GGTCTAATCT
129701 AGGGATTCAA ACTTTCTAGT TAAGAATGTA CAACCTGTGA GGATAATTTG
129751 CATTTTATTC TACATATATC CCAATTTAAC CAGCTTTCAG ACTTTAAATC
129801 ACCATAAGAT TTTGGAAAAC TTCTACTGTC TAAATACAGA ATAAAGTTTT
129851 CTAAGCCAGA TGAAAAAAAT TGCATCATTC TTGCACCCTG CAGGCAAATG
129901 CATGTTGACT GCAAAGCTAT ATAAATGTGT GTTGAGTGAT TTAACAGGTC
129951 TGGCTATTGA ACTTGTTAAA AATGGATGTC AGGAAAGAAA AACAGCAGGT
130001 GGGTGTAGAC TGGAGGAGTG GGCAATGCCT GCTGACAGAA AGAGGAGTGA
130051 CAGCTGACAA GGAGGGAAGG CCCAATGGAG ACTTCAGGCT CACCACGTAT
130101 GGAGCAGTCT GGGGACCGAA ACAAAGAAAT GAAAACAAAC AGAGCACCCT
130151 ACCACCTCAA GAATCCCTAA GGGAGTTATA ATATGCACAA ATGCTCATGA
130201 TTATTAACTA GGAACCAGTT ATTCTATGCC TGCTATGAGC CAGGATTCAT
130251 TCCAGGAAAT TAAAGAGAAT AGAAAGAAGT ATAAAATACA GTGCCTAGGT
130301 CTGCAAGTAT TTATTACCTG TGACACTACT ATGTTGGCCA AGGAGAAGTT
130351 CTGTATATTA TGCTCTTTTT ATAAAAGCAG AAGCATGTAT AGAAACTATT
130401 AGGATATTTT TCTTCAAAAT GTTTAAAATT CTTTAGCTGC TTACAAGAGA
130451 AATTTATTTA GTACTACTTT CTCAAAGATC CCATTCCTG ACAATGCTAA
130501 TAATGGAGGC ATTTCAAGAT AATGACCTCA TAAAATTCAC ACAACTGTCT
130551 GTCTGTGCAG ACTTAGATAG CACAGTCATG ACCTCACTTA GGTCAGGGAC
130601 AGATCTTAGC TTGATAGGGC AATGGTCAGA AATGCAGTTT GGTTTAAACA
130651 GTTTTTTCCT CTTCTCTGTT GACTCATTTA ATGAAAGAAA GTGTCTCATT
130701 CAACCTGCAT ATTTTTTTCA AAGATTCCAC AATGATGGGG CCATGTCTCC
130751 TATGAGTTAT TATACAAAAT GGACACTGAG TCCTGAGGTA CATTAGGAAG
130801 CCCCAAACTT ATCCTTGTAT TTAATTCATT TGAACATTTT GGATATTTTA
130851 TTTTATCAAG CCAGTCATTT CGAGTTGAGA AGTCCGAAGA TCTTACTCAT
130901 TTTAGAAAGA CTAGGTTAGG GCATTTCTC TGGGGAAAGA CCTCTTCTGT
130951 AAGGGAACTT CAAGAAAGGG AGCAGATGGG CTCTGTGTCT ACTGAGAGAC
131001 AGGAGGATAA TCAGGCAGTG ACATAGCCCA TGGTACTGGA GAGAAAGACA
131051 AATCGCTATC CACATAATGG AAGGCATGGG GTAGGGTGAG CCAAATGGAA
131101 GGCTTATAAA GGCAGCAAGC AATGAGGACT AGCCATTTAT TTAAAATGGA
131151 AAAGGGACAA GGTATCTTTA TCCCACTTTA TCCCACTGTC CAACAAAATT
131201 ATTTTAAAAA AAAGAGAGAG AGAGAGAGAA GATGAAGAAA TTAAGAGTGG
131251 GAAAATACTA CTACAACCGT TTGGCCTTTC TGGCCTCTTA AAATCTGAGG
131301 CAGGTCAGGG AAAACATGGC AAGAACACTA AACTTAAAGA GTCAGGAAAT
```

```
131351 GGATGCTCAA GTGTTGTTGC TGCCTCTGAC TCAGCCTTAC TGTGTGACCT
131401 TGAGGACAAT ATTTCCCCAA ACTCCACCCC AGAGCACTTA CCGCTTCCCT
131451 GTAGATAAAT ATAAGGAAGT TAGAACAAGT CTCTACAGTT CTTTCCATTC
131501 CTGACATTCT AGGCTTTTAT AATGAGCTAA AACAAGAAGC TTGTTTTTTA
131551 ATGTGTGACA CACCATGAAA TGTATACAGA GAAGTGACCT ATAAATTCTG
131601 ATTAAGTGTG AATTAGATGC AAATACAAAA TGCAAGATTA GAGTGAAAAG
131651 CATTACCCCT CTGTAGGTCA GGAAGTATAA TGTGGTTTCT TTGCACTATG
131701 AATAATGAAT ATTGTACATG CCGAAATGAG CACTGGAAAA CATAGAAGGA
131751 ACTAGATGCT CTTCTAGAAT GGGCTTTCTT CCCTTTGGGA TAGACTTTTT
131801 TTTTTTTTCC TATTTTTGCA CCCATGCTTA GAGAGGACAC AAACATCTCT
131851 GAGATTCTAC TTGAGACAAT GCGACAAGCA CTTAAAGGAA CACCAAATCA
131901 TTTGAGTGCA CAGGCAATGA CACCATCTGT AGACTTATCT GATCCAGAGA
131951 ACCTGAGGTG GAGCCTATAG CCTCTGGTCA GTTGGAAGCG GTGGGGAAAT
132001 CTCAAGAACA CTTGTCCTGA GAGAAAGAAA ACTTTATCTG CTTGTTACAC
132051 ATGAGCCTGA GCTGAGGAAA TAGACCTGGA TCCAGGGAAT TCGTGTTTAC
132101 TGGGTGCCAC AACTTGTGTT AGCACTTGAC ATGATTCTT CTATTTAAAT
132151 ATTAGACTAA AAACACTCTA TCAGACTAGG GTTTTAAAAT ACTATTTCAT
132201 TTTTTTGGTA CCTATTTATA AAATGGGGAA ACTGAGTCTT GGGGGATATT
132251 AAGGTCTTAT AGACTGTAAA TGGTATAATC CAAGGTTGAA AGGTTTCCTG
132301 ACTCTAATGC TGGTTCTCTT TCACAATACC TCATTGCCTT CTGGAAGTTG
132351 TAGTTCCTAC CCTAGTTCTG CCTTTATTTG GCTGTGGTAA TCAAAACAAA
132401 TCACTTAAGT TCTTGAATCT CATTTTGTTC TTCTGTTAAA TATCACAAAA
132451 CCAACCAACC AACCAAAACA GTGAGAATAT AGCTTTGTTA TGCTTCCATG
132501 ATTTGTGGAT GGTCTTCACA GGCAACAATT AATTCATGAG GAATGATGCC
132551 CACTGCTGTC ATGCAACATA GTGGCCCTGG ATTTTAAGGA ATCCATGTAT
132601 TAATACATGC AACCTGAAAT CACATATGTA AATTGTATTA TATACTTGCA
132651 TATCTATATT GTTTTAGAGA AGAGGCTAAA GCTTCTTGA GAGGCTTTCT
132701 GTGGCATCTA TATCCCCAAA TTCCTAAAAA TCATTAGGTT CTTGGCAGCT
132751 CATTAAGTGA TTAGTAGGTC TCCTTATGAT GTGTTATAAC TCAAAACATC
132801 AGTAACCATC TGAAAGAAAT TAAGGTTTAG GACAGGCATG GTGGTACACA
132851 CCTGTAATCC CAGCATTTGG GGAGGTAAAG ATGGCAGTAT CGCTTGAGGC
132901 CAAGAGTTTA AGACAGCCT GAGCAACACA GTGAGACCCT ATCTTTACAA
132951 AAAATTTAAA ATTGTTATTA AAAGAAATTA AGTTTAGTA CATGAAAGCA
133001 GCTGAAACTC AGAACTGACC CTTACATCAG AAACCATGTG GTATCATGGA
133051 AAGAAATCTG GCAAAGAATC AAAGATTCTG GGTCCTACTT TACTCTGCTG
133101 TGAACCCACT CCATGAATCT GGGCACATAC TTGGGCCCCC ATTAGTTTGT
133151 CATTCAAAAA GAGATGCTAA GTTCCAGCCT GCCTCTCCCA AAGCACTTTT
133201 TAAAAGAATC AAATGTGATA ATATGGATGA AGGCACTTTG GCAAAATATG
133251 AAGTACCCTG CAAAAGTCTG ATATTAACCA TGAGATATTA AAGTATCAAG
133301 TCATTTCACT AGTTGTCAAC TGAGAAAAAG GGAAAATTGC AAGTTCCATC
133351 AGCAAAATTT AGAAGCCTTG CTTTTTCATT CCTTCAGCAA GGTCCTACAG
133401 CTGATATTTA TGCATAAATT TTCTTGACTT TAATGAGAAT TGGTTGCAAA
133451 TACACCTTAC AGGATTCAAA TGGAGATCAT CACCATTCTA GGAGCTGCTA
133501 AACAGAACAT GTGGCTTCTT CTCTAGCCAA GAGTTCTCCT CTTTTATCAC
133551 CTTTATTTTA TGATCAGTGG TTCTCAAGGA ATGGTCAAGC ACCAGCAGCG
133601 TGAGCATCTT CTGGGAATAT GTTAGAAATG AAAATTCTCG AGCCCCATCC
133651 CAGACCTACT AAATCAGAAA TCCTGGAGGT GGAGCCCAGC AGGCTGTGTT
133701 TTAACAAACC CTTAAGAGGA TTCTGATGCC CTGCACACTT AAGTGTGAGA
133751 ACCACTGCCA TAAGTGAGTA TCCTTGGAGA GACCTACTTT GGTCCTGGGT
133801 ACTTTAAGGA AAATCGTGGG GCCCCAGTAA TCCAAAAGAG TACCTCATCT
133851 AAGTCTCTGA AGGGCTGATG TTAGAGCAAA GGTTGGGCTA GTGAATGTCA
133901 ATGTTAGCAA ACATGGTGGG TGTGACCCAA AACATAATCA AATAGGCCTC
133951 TTAGGTTAAA GTCCTGATGT TAGGTTTGCT GGTTGAGAAG GAATACAAAT
134001 GTATCTCAAG GAATGCAGTT CTCTCAAGAT TCAGAAAGTA TGGATACCTT
134051 TGCCATGCCT GGCAGCTTGA AAGAAATAGC AATGTAAAGT TAAACCACGC
134101 CTATGTGAAA GTTAGCTCCA TAGCAGGCTT TCTTCTCTGA GATTTGAATT
134151 TATGGAACAT GATAACAAAT ATGAAAATAG ATAATTTTTA TTGAATATCA
134201 TATCACTACC ACTATTTTAA GTGATTTGTA TGTATTAATG GCTAACCTTT
134251 TTTCAGGTAG TTACTCCACC AAGCTCTTTG CTGGGCCCTG AAAATGTAAC
134301 AGTGAACAAG AAAAAAATCT CTTTCCTCAA GGAACTCACA CTTCAATGAA
134351 GGGAAATTAG AAGAAATTAG CCTATTACTG TTCAAGTTCA GGGTGTTTGC
134401 AGAGGCCTAG ATGCGGCACC TACACTCAGT CTTATGTAAA TAGAGGTTTC
134451 TCAAAGGAAG AAATGTATAA ATTTAGACCT CTGTAGAGTG AGAGGAGTTG
134501 ATCACTTTAG AGTGGAGAAA CAGATTTAGG ATAACTATAC TCTAGATCAC
134551 ACAGCAAGTA AGTGATAGTG TTGGGATTTG AACTCAGGTT GGTTTCATCC
134601 AAAGCCATTG CTTTCAACCA TTAAGGCAAG GGCAGAAAAT GGGTTTTATC
134651 AAGCCTGTCA ATTCTGACAA ATTAATAATG GCTTCCAAGA ATGTGGATGG
134701 TGAATACTCG GTGAGCACTG GGCTCAATTG GAAAAAAAAA TGCCATGATT
134751 AATTAATAAT GTCTTCCCTG GGTTCAGAGA GGAGGGTGTA TGTGTCATGC
134801 ATTTGCCTAC CCTGCAGTAC AGAGTACTGC CTCCAGGACT TAGCACGAGA
134851 GGATGAAATC TGCGGTTGTT TCTTATTCAT GTAAGAGTGT CTATGACTTC
```

```
134901 AAGGAACCTT AGAGCTCAAT GGCATCAGCA GGGGCTTATT ATATGTTAGC
134951 AAAGGTAGCA AGTGACAGCC CAGGATGGAG CATTCAGTAA AAAAGAGAAT
135001 AAAGTTTCCT GTCAAAAGAG AAGACACTAA TTAAGTTTAA CAGTGAAAAA
135051 CAAACAACAA AGCAATTGGT CTTACTAAGA GACTAAACTT CAAAATTTGT
135101 AAGCCAATTT CATTTTCATC TTTTACCTCT GTTAGTTCTA TCAACATGGA
135151 CGGCGTTAAT ATGACAGAAT ATTTGTTTGG AAATAATGGG ATCCATATGT
135201 ATTGAGTCAG CTTCATCACG CCCAGGGGAA ACTTAAATTT TAAAATGCCA
135251 CCCAAAATAT ATGCATTCAA CATGCATAAT GGCTCATCTG TTGAATAGTT
135301 GGGAAGTGAT ATCAATCAGA AGGATTAAGA AGATGGCTGT TTAAGGCAAT
135351 GATGATAATA AATTAGTGCC AGTTTGCTTC AATATGTTTT ATGGCGTCAG
135401 TAAGATGGTA GGTGAGCTCT TTGAAGTCTC GTTGAATATG GTTGTTTCTG
135451 CAGCACATTT GTTAAACCCA TATATGGATT GAAATCATAC TAATGACAAT
135501 AACTGCTCCT ATGACTCAAA AGGGAAACAA ATGGATACTG TCAAGTTAGT
135551 CAGTGCTTGG AAATGGCTTC TGGATGAATT TCCTTTGCAA AAAGTCTCTT
135601 TCACTTTCCC CAGCTCACCT TCACATTTAA CCGTAATAAG CACTCTTTAC
135651 TCTAGACATT TAACAGATGT TTTTAAATAA CTCAGTTATT GGGTATATAA
135701 AAAGAAGAAG ATGACCTCCC CAAAAGTCCC AAGGTCAGAG CTATTTGCCA
135751 TCTGAGCAAT TGTCCCCAGG AAGAATGTTG TGAATGATCA CTTCTCTCTA
135801 ACCGTGACTC AGCACAGCAC ACCAACCTGC ACCCATTTTC AGAGGCTCAC
135851 CTTGGGTTGA GGGTGACTTT GAGTATATGG GCCTCAGCAG TCACCGCCCA
135901 AGGGCTGTGC CTGCTTGTCA TGCTTCTCTA TCACCCCACC CACCTGCAGC
135951 CATCAGAGAG GACCAGTTTC TCACTGATCC TCCTCCCCTG ATGCATTTAC
136001 ATGAGAGATG GGGGAGGAGC TTTCCCCCTT GAGACTTGTT CACCTTGTTT
136051 TACTTTGGAA GACAAGATTT TACAGTACCA GGAATCAAAA CATTTCTCTG
136101 ATCACGTCAT GCTGACCAGT GCTAAATTAT CTCTGATTCA TTGTACATTT
136151 TACAGGTTAT TTGAAACCTC AACAGGGGGG AAAAAAATTG ATAGTATTCT
136201 GTGTAGAAGA GGCTCTGGCC ACAGACCGAA AAGGACTTTA TCTTTACTCA
136251 TCCCTACCAG ATTAGATAAT CACGTGGAAA ACTGTAAGAA ACATCTTCAA
136301 CATACAAGAA ACATGCATCT TTAGTATCTT CTGTATGCAG ATTCCAACAT
136351 GGAGAAAGTG TTCTAGAGCC TAAGGTTTGA GGACTCCAGG TTTGAGTCCA
136401 TGTTAAATGG AAGGAGGAAG AGAACCATTT AAAGGTTTGC ATTTAATGCT
136451 TTTAATACAT TCAGGACTCA GTAACGTCTC CTGTGCAGAG CTCCTGATCC
136501 ATTCACGGCA GCAGAGACAT ACCAAGTCAG CACAGAGAAG ATGCCTTGGC
136551 TATACAATTC ATTCATGTGC CGCAGCCCTG GTTGGCTGCT GAATATAAGT
136601 CCCTAGTACA TCTCTATTTT TTTTTTAGCA ATATTGCTGC TGAAGCTTAG
136651 CTGTGTGCTC TCGTGTGTCC CATCCTGCTC TTTCTGCCTC AGGTGTGTGG
136701 TCTAGTTAAT CCTCCATTCC ATGGGAGAAA CATAGCCCAG GAATGCTGGT
136751 TGTGAGGAGA TTTGATTTCT ACTCCTACTT CTGCCATTAA CTGTATGACT
136801 TTGGGCAAGG CTCTTTCCTG GTCCCAGCCC AGCCCCAGCT ATTCAGCATC
136851 CATTTAGGAT AGGTTGGTCT CTAAGGAGCC TTTCTAGCCC CAGCATTCAA
136901 GGACTTAGTG GAAACTAGAA TTCTGGGTTC AGTTGAGTTC AGTGCCACCG
136951 GCATTTGCCG ACTGACTTCC TCTTTGTCAT CAAGCACCAT ACGGGGCACT
137001 GCAGGGGATA TGTTTATATC AGAGCTCTCT CTGATACCAC GGCACTCACG
137051 GGCAAAGGGA GAGTGGGATG AGAAAAACAA GTGTATTGAT ATACCAGTGC
137101 AGAGCAGACT ATGTTGTATG CTGGAAGCAA AGTACAAATG ATTATAGGGT
137151 CCAAAGGAAG CAGAAATTTC ATTTATTTAT GAAAAGTCAG AATAAAACTT
137201 CATGGCATTT CAGATCAGCC TTGAAAGAGA AAATTCAAAC AGGATCCAGT
137251 GAAGTTTCTA TAGCAACATT TACTGAGCAA ATATTATGTG CCAGCCAATG
137301 TTCTGAGCAC TTTGCACACA GTAACTTATT TATTCCTCTC AGTCTTTTGA
137351 GATTAAGACT CTGGTTATCT GATTCTGTAT ATGAGGAAAC TGAGGCATAG
137401 ACTGGCTAAG GAATAGGCTT AGGCTCATGC CACAAACAAG CACAAGCACA
137451 AGGATTCAAA GCTTAGCGAT CTGGTGCCTA CGCCCGTCAC TTAGTGTGGA
137501 GAGTCAACTG ACTGTCACAT AAACAAGGCC ACCGAACCTG GAGGGAGGGA
137551 GACCTGACTC TGCAGATGAG CTTTGTGTCC CTGGGAAAGT CTTTTCAGCC
137601 TCTGACCTTC ACGTTTCTTA ACTCTGAAAT GCGAATGAAA AATAGTTTCC
137651 TCGTTGGGTT ATGATGATTC AGCAAAATGG CAGGAATAAG AATAGATTTT
137701 AAATGATTAA AAGTTCTAGA TGATTTTAAA TAGGAGAGAA AAGCAGAGGA
137751 GCTGATTGAG CAAATGCTGA GAGGAGGTAA AGTGTGGGAC ATATTTAGGG
137801 CAGAGTGATT ATTCAGTATT AGGGTCTCTT CTCCACAGTT TGAGAGGTTC
137851 CCACCTGAAG TCTTGTTCCA TCTCATCTCT TCCAGCTATG CCAGGCCTTG
137901 ACTCTGCTCT CTCTATGTGG AGAATGACAA ATCTAGTCTC TGTGTGTGTG
137951 TGTCTGTGTG TGTGTGTGTG TGTGTGTGTG TGTGTGTGTG TGTGTGTATG
138001 TGTTGTGCTG TTGAAGCTGA ATGCCAGCAC AATTCTCATC AGCATTTGAG
138051 TTCATTGGCA GCATTTGAAA GAAAGTATAG ACCCTTAGCT CTCAGTGCTA
138101 ATATAGACAT TGGCACATTA GTTTCAGCTG AATTAACTCA TGTAGGACTG
138151 ACGCTAAGGG ACAGTTAGAG TGGAGTGGAA ACTTCTCTGC ATACAGAAAT
138201 AACATCTCAG CACTGTCTGT GTAGCAAGAT GTATTATCAT CATCTTATTG
138251 GTACTGGACA AAGCAGGATC TTCAGATGGT GCCCAGCGAC TATAGGGACT
138301 AATGGGAAAG CAGAAGGGAT GCAGCGTGGT TAAATCCAAA AAAAGAGCAG
138351 CAGCTCAAGA GACAGTAGGA AATACGATGG ACAAGGGTCA GGAGACCAGG
138401 ATTTGAGCCC CAGCTTAGGT GATTGGTCCT GGAAATGTCA TTTCTATAAA
```

```
138451  TTAGCACAAC  TGATAAAGAT  GCTCTCTAAA  GCACCTTCGG  TTCTGATAGC
138501  CTAAAAATGC  ATGAGTTATT  TTTAAGCAGA  AACTTAACTA  CAGCTATTCT
138551  TAGTCTCTCA  ACTAGAAGCT  ACATGTGATT  CTGCATTTCT  TATTAACTGA
138601  GAGGTACAAT  TTTCCACTGC  ATGTTGCTCT  TATCTTTCTT  AGTGGCCAGA
138651  TAATGTTATT  TATAAAACAA  TAACAATATA  GCCTCAGATA  ACTGCAGCAA
138701  CAGAAACAAT  AGTAGTCATT  TACAGGGCCA  GGAACTGTGC  AAAAACACGT
138751  TTTACATGCA  TTTGATTCTC  AGAGCAGCAC  CATTGGGTGG  GTACTATTAT
138801  TTCCATAATA  CAGATGAGCA  AGCAAAGGTT  TCAGAGTTAC  TAATTAACTT
138851  GCCCAAGGGA  CGAAGCACCG  TTTTGAATCT  GGCTTGTCCA  CCATCAAACC
138901  CTTTATCCTT  AACCACTCAG  GTGTCTAGCC  CAGAGTAGAC  ACAGGCACGT
138951  GAGCCCAAGT  GTTCCAGGTG  GCCTTTCAGC  CCCAGAAATC  TCCCCTCACT
139001  TGAAAAATAA  TCTAGAACAA  TTTTTTTCAG  AGGAATCAGT  CTTTCTTCCC
139051  CAGTCAGAAT  GAAGTCACTA  ACTCCAGAGT  AAAAGAATGG  GGCAAGCGAT
139101  GCTCTCTGTA  AAGTGAATTC  TAATGAGGTA  AAAGTGGGCA  GGTCTCTACT
139151  GGAGGAGAGA  GGACAGCAGC  GAGGAGAGTG  GCATGGGAAG  TGGAGAGAGC
139201  TGCATATGCC  CCCACCTCCC  CAGTTCTCTG  AGAGATATTC  CACACAGGAA
139251  TTCCTGACCC  TTGCCCAGCA  ATTGTTCAAT  GACTCTGACC  ATGGAAAGCA
139301  TACGAGAAAA  AGTACGCCAG  AAAAGTTGTA  TCATGGTCGG  TAGACCAGAG
139351  ACAACAGAGA  AACTGGCTGC  AAGTCTCAGC  ATCACTCAGA  AAGCCTTTGT
139401  TCCCAAGGCA  CTATTAAGTA  TCAGGCAGAC  AGAGAGATTC  CTGAGACACA
139451  GCTCCTGTCC  TCACAGGAAG  GACTCACTGG  ATAAGATGGG  AGGCAAACCC
139501  AGGCAGGCTA  GCATTGATGC  AAGATGCTGA  GTGCCATAAC  AAACGTCTAA
139551  GCAGCTTGCT  TTAGGTGTAG  TGTGAAGGGA  GGATCAGACA  TAGTTAATTC
139601  TAACACGAGG  TAGGAAGTGT  TAAGTGTGCT  AATAGCAATA  CAAGCCAAGA
139651  ACTATGAGAG  CCCAGCGAAG  GATGGATTAA  TTCTGACTGG  GACTCTCACA
139701  GAAGAGGTGG  TGTCTAAGTG  GGACCTTGAA  GGATTGGAAT  GAGAGATAGA
139751  GCAGTGATGA  GATTCTGCTC  ATCACAGGGG  AGTTGGTGTA  AAGAGGAAAG
139801  TCTATTTGCC  TGTGCTTGCT  TTTCCGAAGG  CAGGACGGCT  ACAAGCATGG
139851  AGCTGAAGTT  CAGACTGACC  TGGCTTTGAT  TTCTGTGTCT  GTCATTTCTG
139901  TGTGCCCTTG  AACTTTCATA  TTTTCCTCTG  TAAATGGAGA  TTCTAGTACC
139951  TTCTTCATGG  CATTGTGATT  GGGAACAATT  ACATTACAAC  ATGTTTAGTA
140001  ATGCAAGTGT  TTAAGTACAT  GTTCAATAAA  TGATAGTTTT  TATTGTCTGT
140051  GCTATGACTA  TTTCAGTGAA  CATTATCTCA  GTCTTCTGGG  TAGCATCTGA
140101  GGCTAATTGG  CCACTGTTAG  GCAATTTTAA  AAGTTAACGA  AATGCACCTA
140151  CAACTTCATC  TGCATTTGTC  CTCTCTTCAG  ATCCTTGTAT  ATGAGCATCT
140201  TTGCCTATTC  TTGGATCATA  GTCTTGCTTT  TTTGTTTTTG  ATTTGTTTGT
140251  GGGTTTTTTT  TCTATACAAT  AGAGCAAATT  ATTGATTCCT  TTTTATAATT
140301  TCCTCTTCCT  GTTCTAAAGT  CCTACCTTGG  ATGGTCCACT  CTTTGTTGTG
140351  TGTTCAGATC  CAGTAGTGAG  TGCAGAAGGA  CAGTTACCAT  AGTCAGCCTC
140401  TCAGTTAGAA  TTCTGTCGTG  TCTACAGACC  AGCTTTGTTC  CTCTCCTAGT
140451  CACCACTATG  CTGCTGAGAA  TCATCATAGA  ATATGGGAAC  TGCAGGCAAC
140501  TGCAGCCAAA  TCTTTTGTTT  TACCAATGAG  AACCTCCAGC  CCAGGGACAG
140551  GAAGAAAATT  GTCAAGTTTG  TACAGAGAGA  CAGGCAGGGG  TGGGCCTGTG
140601  TACTAGTCCT  CAAGTGTGCT  GACTCACAGG  CCAGTGCCCT  GGATGGTTTG
140651  CATGCCCTTT  CTGCTTTTCT  TCCGCAGACT  TAGGCTGTGA  GGAGGGCAAA
140701  AATGCCTTTC  CTCCTCCTCA  TTTCCTCTTC  CCTCCCCCTT  CCTCCCTGCT
140751  TTGGGTAAAG  CTGAAACATG  CAGCTCGTGC  TTCCACAAGG  CATCCTCAGC
140801  ATGCTTTTCA  CAGCACCCTC  TGCTGACTCC  GGGGCCTTCA  CAGCTTGCAG
140851  CCCAGTTGAC  AGCCAGTGAA  GTGAGAAGAT  TGGAAACACT  TTAAACTGTC
140901  TCAGCATTGA  AGAAAGTGAG  AAGAAGGCAG  GTGGGAAACG  TCTGTGATGA
140951  GCGACATTGT  AGAGAGTTAA  CAAAAACTGG  GAGACTTTCA  GGGTTTCCTT
141001  CTCCTGCTCC  CCTGAAACCA  AGGATTATAA  ATACTTTCAA  TCTTACAGGA
141051  CAACTCTAGC  TGTGCAGTGG  TGACTAGGTT  GAAGAGGATT  TGGAAGCGGT
141101  ACTTGGGCTC  CGTGTACACA  CACTTGGGAA  CACATGCACA  CACGCATTTA
141151  TGCATTTGCA  CTATGTAGTA  GGCATTTCTG  CCTTGGACTT  TTAAAAACAT
141201  GCTTGCCCTT  TAGGATCCTC  ATCTTGGAAA  TCTGCCCTCT  TCTCCCTCTT
141251  TAAGGGATTG  CCCTTCCCTC  TGAATGTGCA  GAACATGCTG  TTCTTCTACT
141301  GCAGAATTTA  TTTCATTTTC  TCATGCAATT  TTTATTAGTG  GCTCATAAGT
141351  GTGTCTTTCA  TCGCATTGGA  ATGACCCTCT  TAGAGGCAAG  GGTCTTGACT
141401  GTTGTTTTCC  CCATACTATA  CCACATACAC  TATGTTGAAT  TGATAAATTT
141451  ACTTATTCAG  TGAATGTTTT  GGTATTATAA  TAGACATGTT  GCAAGGTAGT
141501  TTAGCAAAGT  GATAAGGACT  CATGTGGAAT  CAGACATACA  GGGGTTTGAA
141551  TTGTAGCTCC  ACTATTATCA  GTTCTGTGAC  CCCTGCCTAC  CTATGTTTTA
141601  GTCCCTCTTT  TGTTAAATGG  CAATAATAAT  AAAGTACACC  CTCTTAAGCT
141651  GTTACAGAGA  TTAAAAGAAT  TGATGAAAGT  AAAATGTGTA  GTCTATTTTC
141701  TAGCATTAAA  GTGCTCAGTA  TATGCAAGCA  CCTATTAGTA  ATTAATGTTA
141751  GAAATAATAA  TGATAATTAT  CATCATCATC  ATCATCATCA  TCATCATTTG
141801  TTGCCACTGT  GGCTGTGCCA  GGTTCTCCAG  ATCCTCAATG  ATCCCCTTTC
141851  TTTTCTTAGA  TATGTGAGGG  AGATAAGCAA  AGGAATATAT  TGAAGAGAAA
141901  AAGCCCAATG  TTTATTACTG  CGTGGCTGTT  GCTATGCTGT  GGGCTTCTAT
141951  GAGCTGGAGG  ACCCAAGAAA  GCTACTTTCC  CTGTGGCCCT  CACCTATTCT
```

<div align="center">FIGURE 3, page 40 of 122</div>

```
142001 TGGCTGTCTG GATCTCAGCA CTATGGGGAT CAGAAGAGGC CACCCCAAAA
142051 CAATAGGAAA TAAAAAGGAA TTTTTGCCCA ATGCTTTGAA CAAGGCAGGT
142101 CCAAGCTTCC CACCTCAGAT CTTCAGAGTG AAGTCCCCTC CCTCCCATGC
142151 TCAAAGCAGC TCTAGACCTG CACAGCACCC TCAAAGAAGC AAATCCAGCA
142201 GAGATTTTAT GGCTTTAGCA CCATCTGGCC TTATCTCCTT AGCTGTCTTG
142251 AAGGAGACAA TAGAGGGTGG AGGAGAAGTA ATCATCCTAA AACCAACAGG
142301 TGGCCCCAGT TGTAGGCTAT GTAGCAGCAT GGCTGTGGTG GTGGTGGTTG
142351 CTTGGTGTAT GTGTGGAAGT GCAAGGGAAG TCTATAATGC AGTGTTCTGA
142401 GTGTGTGCAG AACCTATGGA GGAAATCAGA ACTTGAGATA GAGAAACAAG
142451 TCCTGTTAAT GGTAACGCCA TTTGGATCTG GAAATAACTG TGTTTGCATA
142501 GTCCATGTCT GTTCTCTTAC AGATGAGGAA ACAAAGCTC TTCATTTAAG
142551 GAGAGAAATA GTCCACTCTC TTGTTTACTC TTTTACTTGA CATTGATTGA
142601 ACCTCTCAAT GGCAAAGACT GTGTTGTGCA TTAGATAGAT ATGCTGAGAA
142651 ATGAGAAAGA GGCTGTGCCC TCAAAAATTT GTCCTAAAAG GGGAACATCT
142701 AGATAATCAA TGAGCTAATA AATGATTAGA TACAGTGTTG TCCCTTCAAC
142751 CATCTCTTTG GATTCACCAC ATTCTCCACA CTCTCTCTAA AGACTCCCAC
142801 TCATGCCCCT GGTGAGTCAA AAGCTCCTGG CCAGTAGCCT CTTCTCTGAT
142851 CAACTCATAT ATTTCTGCTC ATATCACCTT TGCTGGTGGC ATACCAGAAT
142901 CAAGAATCAA TTCTGTTTGT TTTCAAACCT GTTTATATTT CTGTGTTTTT
142951 ATTATACTTG GACAATTTAA TTAAAATGAT GTGAACTAGT GAAATATGAG
143001 TGCAAAGAA AGTCTTTTTT CTGAAACTAA ATACTTTTGA AAGGCTATCG
143051 GATGAATCAC TAAAATCATT GTAATATTAG GTATCAGAGA GACGACTCTA
143101 AGGTTGGGGA AAAGCATGGA AGAAAATCTA AACTTATATT TATTTTATAA
143151 GTGCCTTCAA GTTCCTGATA TCAAAATATT GATCAATACA TGTGCTTCAC
143201 AGTGTTTTAA GTTTTTTTGG TATATTTTTT AAATAATCTA ATTGCCATCC
143251 ACGTTGCATC AGTTAAGAGG GCTTCAACTG TAATTAAGAC TTTGAGTAAA
143301 GTTCTGTGAA GGATACAAAC TAAATGTTGT GACCGAGAAC AGCAGGATGA
143351 CCTGCTTAAG GTGGTCCTTG CAAGATAACA AGAAGCCAGC CAAGCAAAAG
143401 TAGGGGAGAA GAGTTTTGGG CAGTGAGAAC CGCATCGGGG GAGGTGTGGT
143451 ATGTTGCAGA AGCAGCAGAT GAGGGAAAGG GAAATGATAA GGTTTTTCAG
143501 GTCAACAGCG CTTAGACAGT GCAGATTCTC AAAGGTCATG CAAAGGAGTT
143551 GGGACTTTAT TCAAAGCATG ATGAGAAAGC ATGAGGGGCT TGAGGGGATC
143601 TGTTTGACAG GATGTGATTT CCATTTTCAA AAGAGCTTCC TGGCTGCTAG
143651 ATGAAGGATG GATGAGAACG GAAAAAGGGA AAGTGGGCAA GGTGGAGGCA
143701 GGGATGAATT AAAGTGACAA AGGCAAGTGA TAAAGTGCAA TAAGTCTACA
143751 GTGACAGGTG AGCAGTGGCA GAGCCCTAGG CCAGGGTGAG AATGGAGATG
143801 TAAAGTGGGC ATTGTAAATA CATTTGTGAC ATCTTTAGAG GGACGTGCAT
143851 CCATATTTTC TTTAGTCAAT CTGCATGACC AAACTTACAG CTAATTTTTG
143901 AAGGCATAGG TGATCTGATG GGGGAGAAAA TCCTACCAAA AGTCAGGCAG
143951 CTGGGTTTCT TTTTCTAGTT TGATATTTAT TGGCTGTGCT ACTCAGAGCA
144001 AGCAACTTAA CTCTTGGAAG CTCATCTAGA AAAGGACAAT AATAATATCC
144051 TGTGCAGCCC ACCTCATATT TGGGTTATGC AGTTTAAATA AATAGATGGC
144101 TTACATGTAT CTAGGACTTT GGTAAGCTTA TTCCTTCACT TGATCCTCAA
144151 GGCGCATAAG GCAGATACTA TGGTCCTCAC GTCACAGGTG AGCAGACCAG
144201 TACCTGTTCA ATAAACCGTT ATTGAACATC TACTATGTCA GGGTCAGGGA
144251 CAGGCCCTGA GACTTTTGAA ATAGATTAGA CCCAGCCCTG TCCTACAGAA
144301 GTTCACAGTC TGATGAAGAA GACAGATATG AAAATGTGAA ATTATAGAAT
144351 ATCAAGATAC ATGCTAAGAC AGAAAGTACA TTAGAACCTT AGAGGAGGAA
144401 GAAATGAATT TTTTCTGGAA GGAGTGAAAA GCTTTCCACT GGAGTCAACA
144451 TCTGGCTGGG GTCTTGAAGG ATGTGTAGAA GTTTTCCAGG TATGGAGGGT
144501 CATTTTTGAG AAGGATATGC AAAAGTATGC AGGCCTGGAA GGAAATGGTT
144551 CATATGCATC TATGTGGGTG GGGCCTCAGG TGATTGGCAA ACTGTTAGGA
144601 ATGAGGCTGG AGAGTGAATC AGGGGCAGGG AGGCTCCTGC TCATGGATCT
144651 GTGAGTGAGT GAGTTATGCA AAAGCAGGAA AACTAGTACA TTTGCTTCAT
144701 TTTCATTCTT TCCTCAAATG CTTCCCCCAG TTTCATAGTA TACATGTTCC
144751 TGTGCCTTAT ACTCCCTTCT TCCTTGCTTA CTGTTTCCTC CAGAATTAAT
144801 TTGAATCTCA GCCTTTTTCC TGGAACTCTT AATTTTAGCA GGGATATACA
144851 AAGGGAACAC TCCAGGATAG TGAGAAATGC CTTTTTTTCT CCAAATGTCT
144901 TCCGGAATTC TGTTACTTAG CAGGAGTTGT TTCCTGCCAT GTTTTGAGAA
144951 ACTTTGAAAA GCGATTCAAA CGTTGGTGCA AAGGGAACTA AATACTTGGT
145001 AGTGAGGAGC ATCTTGGCAG AGAAGGCAGC TGAGCTTTTG CTAAAGTCTC
145051 AGTGGTTGAA ATTGTCCAGG AGGCCTGAGT TTTGGTCCCT GGGCTGGGCA
145101 GCATGTGCTC TTGGTTGTCA TGCCTCCATT CCTCCTTCTG GAAAATAGTA
145151 AAGAAGAAAA TGTATAAGTT AGAGAGGTGA AAGAGTGTTA GAGCTAATTA
145201 AATCTCACTT ATTTTACTTA TGAGGAAATA ACTCCCAAAG AGGAGAAATG
145251 ACTAAGTTCA TATAAAGAAC CTGCAGCTAA CTTGGTCATT TAGTCATATA
145301 AAGAACCTGC AGCTTACTTG GTCATTTATG CATTTATTCC ATTCAGCAGA
145351 CATGTTTCAG TGCCTCCCAT GTGCCAGGCA CTGTGGTAGA TGCTAGGACA
145401 ATAGTGATAA GTAAATAAAC ATGATTCTTG CCCTAATCAG GGAGATGAAA
145451 TTAAACAAAT AAACCAAAAG TTAAACAAAA TAATTAAAGA TAGAGATAAG
145501 GTATGATGGA AAGAAACAAG GTACCGCAAT AGAGAATAAA GAGTAGGGAC
```

```
145551 CGGGCACGGT GGCTCACTCC TGTAATCCCA GCATTTTGGG AGGCCGAGGC
145601 GGGTGGATCA CAAGGTCAGG ACATCGAGAC CATCCTGGCT AACACGGTGA
145651 AACCCCATCT CTACTAAAAA TACAAAAAAA ATTAGCCAGT CGTGATGGCA
145701 GGCACCTGTA GTCCCAGCTA CTCGGGAGGC TGAGGCAGGA GAATGGCGTG
145751 AACCCGGGAG GTGGAGCTTG CAGTGAGCCG AGATCGCGCC ACTGCAATCC
145801 AGTCTGGGCA ACAGAGTGAG ACTCCATCTC AAAAAAAAAA AAGAAAAAAA
145851 AAAAGAGTAG GATGAGTATT TTAGAGAAGG CCTCTATGAA GAGAGAACAT
145901 TTTAAGCTGA GATCTGAAGA ATGCGAAGGG GTCAGCCACT TAAAGAGGGT
145951 TGGAAGAGCT TTCTAGGAGA TAACAGCTTG TGTAAAACCT CAAGGCAAGA
146001 AAGTCGGGAC TGTCCTGAAA GGTAAGAGAA AGACCAGCAT GAAGCCCAGG
146051 CAGAGGTGTC ATGGCCTGGA AGCAGATGTG GTGGGAGAGA TAGGCAGGGC
146101 CAGAACTCAG AGCCTCAGAG TTCAAAGTGC CCTTATTGGC AGACTCTTGA
146151 TTGATCTCAC ACCCCTGCGG AAAAGGAAAG GCAAGTATAC GTGCATTGCA
146201 AGACTCTATT GGCCGAGCAT TTGTTTCAAA TGTCGTTTTC GCAGCATGCT
146251 TTGCTGAGAC CATAGATTAC AAAAACAGAA ATAAAAATGA TTCAGCTTTT
146301 CTTCTGTGTC TACCCCTCAA CTTAATTAGT GCTCACAGCT CCAGAAATCA
146351 GTTGAGGGCA GGGGTCAGGA GTGAATTCAG ATATAGATGA AGTGGGACTT
146401 AGTTTCTGGT GTTGCCACTT GGTTTTAAAG ATGCAGAACT TCTTATCTTC
146451 CATAGCTTTA TTTTATCCTT CATTTTTGTC CTTTCACTTC CTCAGTGGAT
146501 AAATCCTAGC TAGAAGATGA ATTTTGCTGA TTTAGGGCAC CCTCGGGCTG
146551 TCCTCTGTAG CTTTCAGTAA AGCTTTGTCT TGATTGACAG ATGCTGATCA
146601 AGTTCATGGG TATGCATTAC AGTGTACGTT TGCTGGTTGG CCTAGGAAAA
146651 CCCATTTGCA CGTATGACTT TCATAGGAAA AGAATGGCAA ATAAGAAACA
146701 AAAGATTTTT TTTCTGCCAC TCACCCAAGG AACAGAAATT AAGACAGCCA
146751 AAGGAAGAGT CTGCCTTCAT TTAACGGATG ATTTACCTGG TGTTCCTTGC
146801 GGTAGTGGTT CATTCGTGAA CCAGCAGAAG GTATTTTGTG ACTATGGGGA
146851 TTGCGGAGAT GACTGGGCCA GGAGGGGAAG CTGTAAAGCT AATCTCTCCC
146901 ACAACCCACT TCTCTTTGGC TAATGGCTTT GCTTTTGTTT GTTCTGCTTT
146951 GGCTGGTTCA TGTGCTAGTT CCCAAAGGCT GCACAAAGGC AGAGCTAGGT
147001 AGATGTACTC CCTACCAGGG CTCTTTAGTG AATCCCACCT CCTAGCCCCA
147051 GATGAGGCTG AGTGAACACT CACTCCAGCC TTGGACTGTA GCCTTTACTG
147101 TGGCCCCTGA ACCTAACCCA AGAATGAGAC TTGTTGACCC AAGGCTCAGA
147151 CCCCAAGTCT CAGATCCCTT ATTTCAAAGA GAGCTCCTCA CCCCAGCTCC
147201 AGACTGAGCC CCTGGCCCAG CATTCCTGGC TGAGTCCCCA CACGTGGTAG
147251 AGCCTTGGCC TCAAAGGGTC CATCCACAAT GTTGTGAGTC CCTTGGTACA
147301 TATTCACTTT TTGAATGAAC CTCTGAGGAC CCCTGCCCTC TCAAGACTGG
147351 CGTCTCCTCT GCCATCTCAT CAGAGTGGCT TTTAGCCATG GAGCAGTGTC
147401 ATAGCCTCCT CTAGTCCAAA GCTGGCCGGT GCTAAGAAGA GGAAGCCTGG
147451 AACTCAGAAC CTCTGTCCTT GTGCCAACAT GTTAGTTGCA GTCTATCTGT
147501 GAGCTTCACA GTCCCATTGA CTCTTGTACA GAAATCAGCA AGCAGTGGTC
147551 TTCAGTCAAA CTGGGACCTC AACAATCGAC TTTGGTCCTG TCAGGGTTCC
147601 TTTCCCTTAC TCTTCTTAAG AGCACCCAGA GTCACCATGA AAGAACCACA
147651 AGTGGAAAAG GAATACGTGG GCTCAGACGT GTGTCCATCC TTGCATGACT
147701 CTTGGCTCCT CATCTGTTCA TGGGTTTAAA GGTCATCCTT CCTGCCCTGC
147751 CTACCTTATT GAGTATTCAC AACAGAAAAT GAATGTAGGA GATTGAAAAT
147801 TGTATAATGC ACTCTAAGTT ATTATTACCT CTCCCAAATT GTCAGCATTT
147851 CATCCTTGCT ATCTAGCAGC AGAATAGTGT AGGGTAGGAG TTTACAAACT
147901 ACAGCCCACA GGCCAAAGCC AGCCCAAGGC CAGATTTTCT AAATAAAGTT
147951 TTATTGAAAC ACAGCAATGT AAATATGTAA ACTCATTTGT TTACATATTG
148001 TCTTTGGCTG CCTTCATGCT ATAAAAGTAG CACTGAGTAG TGCAGCAGAG
148051 ACCACATGGC CCGCAAAACC TAAGATATTT ACTATTTGGC TTTTTGCAGA
148101 AAAAGTTTGC CTATACCTGG CATAGAGGAG CAAAGTGAGG ACTCTGAAGT
148151 TGGAATGCCT GTGTTTGGAT TCTGAATCTT CTACTTAATG GCTATATGAC
148201 CTTGTGCAAG TTAATTAGCT TCACTTTTCT CTCTATGAAA TAAAAATAAA
148251 CATTGTATCC CCACCCTGTG CTATCAAATT AGCATTAAAT GAGTAATTCA
148301 TGTAAGGCAC TTAGCTTAGT ATTTGGCACA TAGTGAGTGC TCAGTGTTGG
148351 CTGTTATTAT TATCCAAAGA ATGAAAGCTC TGGTTTGTGT TGATGGACTC
148401 TCAGGGGATG GAGTAGCATG GTTTATGGCA CAGGCCATGG AGTAGGACAG
148451 AACATTATTT ATATCCCAGC TCTGCCACTC ACCACATGAA TGACTCGGAG
148501 AAGATTAATT AATCTCCCTG AACTTCAGCT TCCTCATGCA TGAAATAGGA
148551 AAAAGAAATT AAAGAGTTAT TGTGAAGAGT AAGTGATAAA ATGCATGTGA
148601 AGTGCCAAGA ATAGAATTTG GAACATAGTA AACACTCAAT AGGTGATATA
148651 AATACAATAA TAAATAAGAA GAAGAATGGT ACTTTTCTAA GTAGTACTAG
148701 CTTCTCAGAA CAAATAGACA GTTGGTAGTG ACTACTATGA AAACATCATG
148751 TGAGGTAGGA GGTTCTACTT ATCATTAATA ATGCTCTGGA CACCAGGTTT
148801 TGCATATTCC AGGCACATGT AAATTAAATA CACTTTAAAA TGGAGTTGTT
148851 TAGACAGCTG TCTAGGCTTT TATCTAGGCC AATAGTCCTT CAAGACCAGG
148901 TACCTTTCTG TACTAACAAT CCATGACTCT ATGACTGTTC TTAGGTGAAG
148951 TGATAGGTCA AGGAGAACAG CATACACGTT GAGTCACTCT ATGGACCATC
149001 CCGGAAAGAT CCTCTTCTCA TAATAACACG TGGGTACACA GTGATGCTAA
149051 GGAGTTTGCC ATATGGGGTG AAAATGCTCT CATTTTGAAC CCATTCAACA
```

```
149101 TCTTCAGGGT TGAGTTCTGT AATGGGATGT AAATCTTCTT TCCTGGGGAG
149151 AAACGGCTGA GGAGACTGGG TGTTGTAGGT GGAATACATT AAGGCTGGTG
149201 GGGTTTGAGT GCCAGCCCAA GAGCACAGCT CTCATTCTCA GTTGGCCTAA
149251 GCTAACAGGG AGTGATCAAG TTCAGTGGAC TGAAGCACAG GGGAGTATTA
149301 CGTATCTTCC AGACCTGTGG ATGCTAGATG GGCAACCTAA TTTAGAGGAA
149351 TATGAAACAA GTAACAGCAC CGTGCAATTT TCGTTATTCC CTACCTAGCT
149401 CTTTATGAGT TATTGTTCAT TATATTAGCA GAAAAATGAG GATTTGGAGA
149451 GCCTCTTCCT TCAAGGGGGC TTACATCTCA ATTGCAGGTG AAAAGGCATA
149501 AATACACAAA AAGTTACTTG ATAATATAAA ATAAAATAAT CAATTCATTC
149551 AGTGCAAGAC ATGTCATGAA AGAAAGATGG GTCAACTTAG TATCCAGAGA
149601 TTAAAATAGG TAAATGACTT GCATTCATTC ATTTATTCTC ATATTCATTC
149651 ATGTCCAAAA ATATTGTGTA GTCATTATGG GAACCCTTCA AAGGGATATG
149701 AATAATAATA TAAGCTTTAT GAGGGCAAAG GCATCATCTG TCTTATTTAC
149751 CACTCTATTC CACAGTGTCT AGCCCATAGA GGAAAGACAA GGACTGAGTT
149801 AGACATAGAT CCTTATTTAA TACTCAGTGT TTAGATGTAT GTAGTTCCTA
149851 ACACATTTGT GGACATTTAT GGAGCTCCTA ACATGATTTT GGGCTCTAAT
149901 TTATGAAATA CTGCAATCAG ACATTTAGTA GACATCTGTT GGTTTGATAT
149951 GCCCAGCATG CATCTCCTCT CTGTTCACAG CACCTTAATT TTCCTCTGGC
150001 TGGTAGCTTA GTAACGTGGA TAGTTGTTCT GCTTCCCTTG ACCCAGGGGC
150051 GGCCCATGCC CAAGCAAGGC TAATCTTGAA CTGTGTAAAC AGTTATCACA
150101 AATGGCTGGA GCAATGGTGA GACCCTAAAG AGACTGTCCA TGAAATGCTG
150151 ACATCTAGAT TTCTAGAGCT GCTGCAATTT CTGTCTTATA TGAGGCACTT
150201 TTTCAGCTGG GGCTTCCTCA TATCCTTCCA AAATTCTGTT CTTACAAATT
150251 ACAGAACCTA AACTAATAAA GCATGGGTGT TAGATAAAAA ATTGATAAGA
150301 CGCACACATT TTTATGTACA TTTAAAAGAT GGGTGGAGAC TTTCAGTTTA
150351 TAGCTAGGAG TAGGGAGGTG TAAGGGTCTT TATGAAGGAG ATGGCATTTG
150401 AGCTTAACTT TTAAAGAATG GAAAGGATCT GCAAAGATCC TTAAAGAAAG
150451 AAAGCAGGAG GCAGGAGGCC TGTGCAGGCT GGAGCAGGGG CATGAGTGTA
150501 GGCCCAGAGC CTACGGCCGA GAAACAACTG AAAAACAGCC ACGTCTGTGC
150551 TGGAACTCAG TGAACTCACT GAGCATCCCA TGTCTGTCGT GCCATTACAC
150601 TTAAGTCAGA TGTTCCTGTT CCCATTTTCT AGCTTATCCT ACTGAGTCAC
150651 AACAACCTTC CCCTCCATTG TCTCTCATCC ATGGACTGGA CTTGAGCTAT
150701 GGGATGTTAG AGAGGAAAGG TCTTGTGAGA CCAGCTAGGA CTGACCCTCT
150751 TAGGCCAAAG TGATGCTAGA GCCCTCCAGG CACCCATGCC ACACATGAAG
150801 TGCCGGATAC CTTAGAAGAG CTCAGTTTTA CTCAGAGAGC TATGTGATCT
150851 CTTTCTCCTC ACCTGCATCT CTACTGCTTT CCTCCTTTCC CCCTATACTG
150901 TGTCCACATG GGCCTTCTGT TTCTCAAGCT CTTCAGTCTT GTTCCTGAGC
150951 CTCATTCAGA GCCTCTGTTC CATTCCTTCT GCCTGAGACT GCTTCTTTAG
151001 CCTTTAGCCT GGCTGGCTCC TTCTTAGGGT TCATTTCTCA GCTCCAATGC
151051 TAGTGACACA GAGAGGTCTC CCTGACCATC CTGTCTAAAA TAGTCCTGCC
151101 AGTCACTCTC ACATCATCCC GTTTTATTTT CTTTGTAATA TTCGCAGCAT
151151 CCAAAATGGC CTTGTTTATT CACATGTCAT CTCTCTCCCT CTCTAGAGCC
151201 TAAGCTCCAA GAGAGCAGAG ACTTATCTTT TTATCCAGTG ATGTATACCC
151251 CTAGCACCAG CTTGCTGCCT AGCATACACT ACACATTCAG GAAACTTGTT
151301 GGATGGGTGA ATGATTAGGC AGAAGAAAGA TGGAGAGAAG AAACAGAAAA
151351 TTTCAATCTG TAGGACCTCA CATCCCCAGT GAGTACAAAA GTTCTATTAC
151401 AGGTACTTCA CCAAAACAAA AAAAGTTTGA GAAACACTGA TTTAGTTTAA
151451 ACTCTGTTAT CCAGAGAGGA AAAATGCAGC CCAGAGAGGA GAAGGGGCTT
151501 GTTCACAGAC GTGCTTCTTT GCATTTACTT CTCCACAATC ATGTCAGGCA
151551 CCTGAAGATT TTTATAAGGG AAGCTCCAGT TGATCAGTCT GTTTGCCCTG
151601 GCCCCCTGCC CTTGGTTACA TATGTCAGCC CACAGGGTGA GTCTAAATTC
151651 CAGGACCAGT GAGCCCAGCC CTGTTCTAAT TCTTAGCCTC GTATGCAGTA
151701 CCACATCTCA TTGGCTTTCA ATGCCTAGTA ATTAAGACCC ATGCTTAATA
151751 ATAAATACAC AAATATGACC TGGGAGGATG GCTTTTCTTC CACATCTCCT
151801 TTTGCAGCCA TCTTCCAACT GGGCATCAGG GCCTGGATGA AGAAAGTTCT
151851 TGTGAGTCTC AAATGAATCC AAAACCAAAG TGAAATGCTA CATTGACACA
151901 TGACACAATG ACCTAACTTC TCCAGCACGG GCAAGGCCCT TGGCAACCTA
151951 GTCCCCACCC ATCTCCAACT CTGTGCCATA CCCCGACCCC AGTCATACTG
152001 GTGTTTCTGG AGTTTTTCTG TTGTGCCCTT CTCTTTTATC TTGGTGCTTT
152051 GGATAAAGTG GTCCCTCTAT CTAGACACAG GAACAAGGTG CTTAACACTG
152101 TGCCCGGCCT CTGCTAAAGG ACCCAGTTAA CACTGACTAT AATAGCAGTT
152151 ATGATCATTT ATCCTGTGGC TGATCCCTTT ATTACTCTCT CAAATCACCC
152201 TTTATTTTCC TTAATGTAAA ACTCACTGAA CACTTGCTTA AGCTCTGTGA
152251 AGGTAGAAAA CATGTCTGTC TTGTGTAATT GTGGTACCCC AATTTTCTGG
152301 CAATATTAGT TTCTGGTGCC AATAAATATC TGTTGAATTT ACTAAATAAA
152351 TGATAACATT GTATCTAGTA AATGACAGAC ACCCTGGATG TGTCTCAGAA
152401 TCCTAAGTAA ATGTGATATT GTTAAGGGC TTTGGGATGA TTTATATCTA
152451 TTATGGTAAT TCTTTGCATG TCAGCATTAT ATCTACGATA CAAGAGAATA
152501 TAAAAAGGGA TGGACAGGCA CTCTTATTGT CCTCTGAGTG ATGGAAATGA
152551 AGCACATCCC TTGATGTTAC AACGTTAGAG TAAGATGATG AAGAATGTGA
152601 TTCCCACCAA TAAGGATAGA ATTATTCCAG GAGGGGAATG AGTGCCTGAA
```

FIGURE 3, page 43 of 122

```
152651  AGTCCCCCCA TTCACACATA CTTTTGATCT CCCTCCCCTA AAATGAAGCT
152701  GTCCTGTCAC CTCATTATCT GCTATTTACA ATGAGGCTGC CACATTCCCA
152751  GGGACAGGAG CCAAGGAGAA ATGTCGGTGT GAGAGGCCTT AAATGAAGTG
152801  ACAATAAAAA AGGAGTTGTT AATGCCAGGA GTTCCCTCCC TGGGAGACAG
152851  CTGTCAGGGC CAGTACCCAG GGCTGGGAGA TTTATTGATA CTAAGTGGAT
152901  GGTGCCCTAA CCAGGAGTGA TTATCAAAGA GGTTTGAGTG AGGTGAGGAT
152951  AGAATTGGAC AGCCCACGCC ATGCAGTGTG TGGGTTTTCC TGCTCTCACT
153001  GGTTCCTGCC CTCCTGCTTC CCCAAGAGGG AATTCCTGGC CTCGTTTTTT
153051  ACTTACTCTG ATTGTTGGAC ACGCTCTGCT ACAGAGTTTC TTGGAGGCAG
153101  GGCCCTCAGA ATCTGACACT CTGGCAGGGC TCCCTGAATG CTCTCTCTAT
153151  CTCTGCCAGG CCTTTGCTGT TGCTCTTCCT TCTACCCATA TACAGTACTC
153201  TTTATGCACA TGTAACTGTA CCAAAACCTC TCTCCTGGCT GATTCCTCCT
153251  TATCTTTCAG TGTCAAAGCT GGCACTTCCT CTTGGAAGCT TTCTTTGAGG
153301  TCCCCAAAGG ATGGGGTTAG GTGTCCCTGC CTGCTGAACT CATCCTTAAC
153351  ATAGCATGTA GACTGGAATTG CTATTGCCTA CATAGTTGTC AGTCTCTCCC
153401  ATTGTCAAAG TGACAATCCC AAAGTGGTTG GGGATGGGCT GGTTTACCAC
153451  TGTATCTCCA TTGCCTAACA TAGTGTCTTC ACAAGTGCCA GATACTGGGT
153501  GTCGAATGGT GGGTGGATGG ATAGATGGAC CAAAGAATAG GTGTGTATGT
153551  GTATAGACTT CCCAGGGATG AGACAGGAAT ACATCAAACA TACCACTCAA
153601  TTTTATTTGC TTATATTTCA ATAGATTCTA ATGTAGTAAT GCCTCTTTAT
153651  CTGGCATCAG GGGAAGACAG TGTGCTACAT GGAGGATTT TCCAGAAACT
153701  GAAGCTGACC CATGTCCCAA GACTATTTCA AACATCCATG ACATATCACA
153751  GACATTAAGG ACTCAAGCTC TGTCGTCAGA CTGGTAGAGG TCATCTCTCA
153801  ACTTGCCTTG TGCTGTTTCT AGACCTCACT TCTCCAATTT GAAACCCACC
153851  TCAGGGAATG AAAGGAGTTA ATGTAGAGAA ATGTCTTTGG CACAGTGTCT
153901  GGCACTTGGC AGGTGTTGAA GTATCAGCTC TTAATTATTA CTATCAGAAA
153951  GCATTACAGG CCAGTCACAG TGGCTCACAC CTGTAATCCC AGCACTTTAA
154001  GAGGCTGAGG TGGGAGGATC GCTTGAGACC AGCAGTTCAA GACCAGCTTG
154051  CGCAACATAA TGAGATCCCA ACTCTACAGT TTGGAGCTGC AGTGAGCCAT
154101  GATGGCACCA CTGCACTCCA GCCCAGGTGA CGGAGCCAGA CCCTGTTTCA
154151  GAAAAAAAAA AAAACAAAGA AGAAGAAGAG GAAGAAAGAG AACACCATAT
154201  TCAAGTGCTT TCTAAATGGC AAATACTGCG TTTCATCCCA GCAACATGAT
154251  GGAAGTCTGT GCATTAACCC AGTACACACA GAGTTCTGAT TCTGAAAAAT
154301  GCCCCATCTC TTCTCTCCTA CTTGTCATAT CTGACAATGT AGTCTCCATC
154351  TCTGGCTCCC TTTCTAGTCT GCCTCCTTTC ATCTCTCTAC TGGGTAACTT
154401  ATTCACATAG CAGGTTAAAA GTTGTGTCTT AACACTTAAG ACTCCAAATG
154451  CATCTATTCA GAAGTCACAA AGGTAAATCT GTTCAGGAAA GTGAGATATG
154501  GGCTGAGGCA CAACTCCTGC AGAGTAGTGA TCTTTGCAAA GAGGTAAGAA
154551  AAGCAGGCTG CAGGCAGGAG GGGGACAGTG CAGGATCCCA GGATTTTGTT
154601  ACAAGGGAAT CCAAGAACTC AGAGACTTAC CTGCTTACTG GATTTGAAAA
154651  AGTGCACTGG GGGTTGCTAG AATTTGACTA AATAACTAAA ATATTGTCGA
154701  ATCAGTAAAC ATTTTCCAAT CAATTAGACT AGACTCTAGA ATGTCAGAGT
154751  CTGAAAGGGC ATTAAGCATT ATAGAGATCA AACAATCATT TCACAGATGG
154801  GAAAGCTGAG GCCTAGGAGA GCGTGGGATT TACTTAAAGT CATACAAGTA
154851  CTCTGTAATG ATAAAACCAA AAAGAGAATC GTCCAGGTCT TCTGACAGCT
154901  AGCCTAGTAC TTTGTCTACA GAACCATGTT ATCTCTTCTG ATTGAATATT
154951  GGTTGTGACA GATTCAAAGT AGATATAATA CCTCACAACT ACTAATTATA
155001  TTTATCAACA TTTAACCAAT GACTGCCTTC TCCCACAGGC CTTGGGCCTA
155051  TAGGGTCTGT CTGTCTGTTT CTGTCTCTCT CTCTTTCTTT TACTTCCTCT
155101  CTCTCTGCTG TTGCTTAGGT TTGGCTGAAG TGTAGAAATG GTCTGACAGT
155151  CAGGCACTGA GCAACTCTGG GAGCCAGGGT TCACTCAAGT AAATCCAGGC
155201  CAGGCTACCT CCAAGCCATG CTCTTTTAGG GAGTAGTGCG TAAATGCACC
155251  CTCTTAGCCT TAGAGGAGAA AGCACTCTGT TTAAGGTAAG AGATGTTTGC
155301  AGAAGGGGAA AATGAGGAGA TAATTTGAAG GGGAAAATGT CCTGGCCTCC
155351  TGTGTGTCTA AGGATTTGTT GTGTCTGCCT GCTCCCATTT CGTCCACCCC
155401  CATCTCACCC TTTCCTACTT CACTTCTAAA GTCCTAGCAA GAAACACCAT
155451  CCATGAGGGC CCCAGAGGCC CAACTAAATG TGTGAAACCA AGTAGGTGAC
155501  ATGAGGGAAT AGATCTGGAT CATAAGATTT ATATCCTGTA GGATAATATT
155551  TTATTGCAGC AAGGGGAGAG AAGAGATCCT AAAAATACTG TAGAGAGTAT
155601  ATTATAATAT TTTAATGAGG TTTATGTGCT CCCCATATAC ACTTCACCCT
155651  GGATGATGGA TTGTGCATTT TGACAAATCT ATATTAACA TTGGGAGAAT
155701  AAATATGTGAT GTATGCTTCC TGGTAGAGAA ATCATATTTA TGGAAATCTT
155751  TATTCTAGTT ATTATAATAG ACATTTAAAG ACAGTGCCTA TTGTGGGCTG
155801  TGGATAGATA GAGTGTCCTC ATTAGGGTGG AGGAGAAAAT AGTGTGAGTG
155851  GCAGAGGATA AATGGCTACC TTAGAAGACA GCAACCCAGG CAGGGGAGCA
155901  ACTAGTTCAG GGTGACCCAA CAGTCACATC TCTGTTTGGG TTCAGCTCCT
155951  CCTCAGCCCC TGCTGCAGGT CATATGCCCT CATCAAGCAC TCATCATTCA
156001  TTTATTTATC AAATATTTAT TAAGCATCTA CCATGTCCCA GACACTCTGC
156051  TGGCTTTTGG GCACAAAGAA GCATGTCCTA ATTTTCAGGG AATTCACATT
156101  GACTAAAACA GCCACACATA TATACAAATA AACAAAGAAA ATTATTTTAG
156151  ATTAATTAAA GAATGGGAAA TAAGACAGAG TGATGTGATA CAGACTGATG
```

FIGURE 3, page 44 of 122

```
156201 AGGGGTCACT ATTTAGAAGA GGTGATGAAG CAAGATCTAT ACAGAGAGGT
156251 GAGATTTGGG CTGAGGCACA ACTGCTACAA AGGAGTGATG TTTGCAAAGA
156301 GGTAAGGGAA GAGCATTGCA GGAAGGAGGG GAACAGCTGG TGCAGAGTCT
156351 CCCATGCAGA ATGAGCTTGG AGCCCAGAGG AAGAGAGTGA AAGCCAGTGT
156401 GGCTACAGCA GGCAGCAAGG AGAAGACGGT TGTAAGTTAG GTGAAGTCAG
156451 AGGAGCAGGC TATTCATGCT CTGTGTGATG GTCAGATGTT GAGACTTTTC
156501 CTGTGTGCAA TGGGAAAACT TTGAGTGGAT TTGCACAAGG AGAAAGAACA
156551 ATGTGTTTTG TTTGTTTTGT CTTTGTTGTT TAAATAAGAT CTCTCTGGCT
156601 TCTGGGTAGA GAAGTGATTT TGTCACTGAA AACCAAATGT CCTAAAGCTC
156651 AAGGCCATGA ACACCACCTT CAGATACCAG GAGGGCTATA GAGTGGGTCA
156701 AGAGCAAGAA TTGTGTGAAA CCAGAATCTC AGTAACTAGA AGTATGCAAG
156751 CAGATGTTAA TGATCACCTG CCAGGTTTCC TGCAGATGGT ATGCTGGTTT
156801 TCAGTGGGAG TAGGACAGAT GGGTTATATG GTTCAGCTGC AATCTTTAAG
156851 AGATTATGAC CTTTAAAGCC CATTTTCTCT AGGGACTAAC AGAAAACGGA
156901 GACTCACAGT AGACAATTAG GTACCACTGG TTAATTGCAT TCTTTATTGC
156951 AGCATGGGCC AAAAGATTTT CAATAACATT TCAAAAGTAT TCACCAAAAA
157001 AAGGTCTTGG AGGCAAATAG ATTTGACAAA ATCTGGGATA AAAATGGGTA
157051 GAATTCCTCA CAATCTTTTA TGCAGCTAAT GTGAAGTATG AAACTCTAAA
157101 ACAGGGACAA AGTATGCACC ATTTCCCAAA TGTATTTGAC CAAAGAAGAC
157151 TTATTTTTTA AGGAGCATCT TGTGGGGCTA TAGTTTCATG AAACCTTCTG
157201 GGCAATGGTC GCATACTGTA ATTTGAGATC CCATACACAG TGGCAATGTG
157251 GGGTTCTGGA AACAGGTGAT ATGGTAAAAA GAGTAAAGGA TCTAAGAGCA
157301 TTAACTTTTT TATCTTAAAA GAAAAAAATA ATAATACCTA AGTCACAAGG
157351 ATGTGATGAG GACTAAATAG CCTAATATAT GTAANAAGGA CCACAAAGCA
157401 CTCTAAAATA CTGTTTTCAT GACAAGGATG AATGACTTTC CTCACCATCC
157451 ACCTTGGAAG GGCAATTTTT AGGCATTGAA GATGGCCTTG GGGTTGGTCT
157501 CACTGGGGCA AAGATTATGA ACTCTCATCC TATATCATAT AGTAAAACAA
157551 AGTTTAGGAG CTGACTGACT TGGAGTTTAA TCCCATGACC TTGGTCTTAT
157601 TAGCATCGTA TTTTAATTAG AAGTATAATC AACCACAAAC CAGGATTGGC
157651 AACTGCATTG GGATTCTACA GAATCGGTCC TGTGGGTATG TTCTCACAGC
157701 TAAGCTATTA CTATGGCTGA TACACTGGGG GGTCTGAAAA TCAGCTAGCA
157751 AGATGTACAA GCACAAAGTG AACATTAGCA GACAAATGAA CACTGAGAGT
157801 TAAGGGCTAG ACTGGGAAAA TCGACACTTG TTTTCTTAAA CGTGTATTAG
157851 CAGCAATAGC TGGATTCTTC CTGTAGCACC TTTTTATGCT TTGCCTTTAA
157901 TTGATAGACA ATGTGAGGGG AAGATCGTTA GATTAAGAGT CAAGAATATC
157951 TGCCCAAGTC ATATGTCCTA GCTGTGCTAC CTTGAATATG TTCATTAAAT
158001 TTCTGAGCCT TGGTTTCTCC CCTTTAAAAA AATGACCCAG TCATCCCTTT
158051 CTAGCCTCAA TAGGGTCATT GTAGAGACCA AGTAAGGTAA TAGATGAAAG
158101 TGTCTTATAT ACATGGCTAC TGTAATTAAT AACCATGACA ACTTCTGGCT
158151 TCTAATAGAT ATCTAATAAA ATTGGATTTA CACAGATGAA TGAGGCATCG
158201 AACAGGTGAA TGTGTGAGTG GGGTAGTTAG ATGGGTAGGA TGGATGGACA
158251 GTTGGATAGA CTGGTGTGTC GAAAGGATGA ATGGATGGAT TGGTTTGTTG
158301 GATGGGTAGA TGGATAGATG ACAGTTGGGT GGATAATTGA TGGGTTGGAT
158351 GGATGAACTA GTGGATGGAT TCATTTTGGA GTCATCTGAC CACTTTTTGC
158401 AGTCTTCTAT TCATTAATCC TTCTCTTCTC TTGTAGTCTG TTCCCAGTTC
158451 TCCAAAGGAG TCTATGCCAT CTTTGGGTTT TATGAACGTA GGACTGTCAA
158501 CATGCTGACC TCCTTTTGTG GGGCCCTCCA CGTCTGCTTC ATTACGCCGA
158551 GCTTTCCCGT TGATACATCC AATCAGTTTG TCCTTCAGCT GCGCCCTGAA
158601 CTGCAGGATG CCCTCATCAG CATCATTGAC CATTACAAGT GGCAGAAATT
158651 TGTCTACATT TATGATGCCG ACCGGGGTAA GCCAAGGGTT AGGGGAGGGA
158701 GACTTTTGAG GGATGGAGAG AAAATTACCA GCAGAAAGGA GAATGATGCC
158751 TCACTGCTTC CCTGAAAAAT ATGGGAAAAT TATCCAAAAT GCTTTATTTC
158801 TGAGAAATCT GACTGATTTA TCAGTAGCTG ACCTCTAATT CAGTTTGGAA
158851 ACGCATTCTG AGAATAATTC TCTTAATGCA CCATGTCACT CTACAGCTCA
158901 CTAAGCTTTC ATGGCTCCTG AGTCCAAACT CAATGCAAAA GGACCTCAGA
158951 CTTTGGAGTC AGGCAGATCT GGATCTGAAA CCTAGGTTCT GTCCTCTCCA
159001 GCTGTTTGAC TTTGGACAAA CTCTCTCTGC CTCAATTTCA GCACTTATAT
159051 AATGGGGATA AAATTCTCTA TGCCTTCATT TTCTCATGTC TATAATGAGG
159101 ATAAAAACAA TGTCTATCTT ATAAAGGTTT TGTGAAACTG AATGAGATGA
159151 CTATGAAGTG TTCAGTGCCT GCAACATAGT AAAAACTCAA AATTCTTTCT
159201 CTGTTTTAGA TGTTATCATC ATCATCATCC TCCTCATCAT AATCTTCATC
159251 CTTCTCTGGG CTTTCTAATT CTTCCTCCTT TGAATTTAAC ATCACATTTT
159301 CCAAATGTTT TCTATACTTT TTCTTCTCTA TGTCTTTACT CATGTTATTC
159351 CAGTTTTCTG GAATGCACTT CCCTTCTCCA ATTTACATCT GTAAATCCTT
159401 CTCCTCTTTT GCAGGATGTC CCTATTCCCC AATTCTGTGG ATGGGAGCAC
159451 TCTCTCCAAC TCCCATGATG TTTGTCTTGT ACTGTCCTAC CTTCTCATTG
159501 TATACTAAAT AGTCTTGTAA TAATTTATTC ACTACTGGTG TAAACAAATA
159551 AATGGGTCAC GCAAGACCTG AAAGGTGAGA CAGAGGAGTA CAGTACTGAT
159601 GTGGTTGCCT GCAGGGAGTC TTAGAAAACT TTTGAGTTGG AGAGAGGTTT
159651 GTGAAAGTGA TTTTTCAGGC AGTTAGGCAG GCGTCGTTCA GATGGGAAGG
159701 AGCCAACAGA AGAAACCAGG AACACCCTAT TTTCTTTGAT TTTCTCTTCA
```

```
159751 CTGTCCCCAC TTTGATGACT TCCCTTCTCA GACTGCGACT ATTGCAGGGG
159801 TCACCTGGAA GTCTATTTCA GGACAGCTTT GCAGCATAAT GTAGCTGGAG
159851 GCCTGGAAGT AATAAAGCCA GAAAAATGTA CCTTTGCTTG TGGGAGATCA
159901 TCTCTGGGGT CAGCAGAAGC ACCCACACTC TCAAAAGAGC TCCACCTACC
159951 TCAGAACTCA GAGCTCAGAG CCCTGCCGTT TGTCAGCTGT GTGACCTTGG
160001 ACTAATGACT AAATCTCTCT AAGCCTCAAT TTCCACACTA TAAAATAGGG
160051 ATAATAATAG TATCTACCTT GAAAGATTAA GTGGATTAAA ACCAGTAGAA
160101 CAGTGCCAGA CACACAGTAC ATTTTCAGTA AATGTTGGTC TCAAACTCAC
160151 CAAACAACTT GCACTGAAAA GGAAACAAAG ATAGGAAGGC ATAGCAGAAC
160201 CAATCTGCAG ATGATTCTTG AGGCCAGATA CCATATTGGT CACTGTGGAA
160251 GAGGTTAACT GTGTTACTGA AAGTCAGAAA TGACATACAT ACAAAAAATT
160301 AATCCATGCA AGATCAAAAT AATATCTGTG AATAATTAAT AATGACACCC
160351 CCCCCCCAAG ATGTTCATGT TGCAATCTCT AGAACCTGCA AATATGTCTA
160401 TGTTACATGG CAAAGGAAAA TGAAGGCTGC AGTTGGGATT AAGGTTGCTA
160451 AACTATTGAC CTTTAATAGG GTAATTATCC TGGATTATGT TGGGGGGACA
160501 CAATGTAATC ACAAGGTCCT TAAATGTGGG AAGTTGGAGT CAGAAGAGTC
160551 AGTGTCAGAG TGGTGCAATG TGAGAAAGAC GACCACCATT ACTGGCCTTG
160601 AAGATGGAAG GGGCCATATG CCAAGAAATG CAGGTAGCCT CTAGAAGTTG
160651 GAAAGGCAAG AGAGTGGATT CTTCCCTAGA ACCTTTAGAC ACCAACACAG
160701 CCCTGCTGAC ACCTTGATTT TAGCCTGGGA CACCTATCTC ATGCATCTTA
160751 CCTCAAGAAC TGTAAGTAG TACATTTGTG TTGTTTTAAG CCAGTAAGTG
160801 TGTGATAACT TGTTACAGCA GCAGTAGGAA ACTAATACAC CATCTAATTC
160851 TCCAAGAAGA AACAAAGCAG CATTGAGTAA TGGCCTCTCT ACTCATTTAG
160901 CTATAGATCA GAAGAGAGTA GTTTAATTCA GGACACATTT TATTTATTTA
160951 TTTATTTATT TAGTTAGTTA GTTAGTTGAG ACAGAGTTTC ACTCTTGTCA
161001 CCCAGGCTGG AGTGCAATGG CACGATGTGG GCTCACTGCA ACCTCTGCCT
161051 CCCAGGTTCA AGCAATTCTC CTGCCTCAGC CTACCAGGTA GCTGGGATTA
161101 CAGGTACCTG CCACCATGCC TGGCTAATTT TTGTAATTTT TTTTAGTAGA
161151 GATGGGGTTT CATCATGTTT GCCAGGCTGG TCTCAAACTC CTGACCTCAG
161201 GTGATCCACC CACCTCGACC TCCCAAAGTG CTGGGATTAC AGGCGTGAGC
161251 CACTGGGCCT GGCCTGCCAG GACACATATT AAACACCTAC TGTGTGAGAG
161301 ACAAAGTATT AGGTATTAAA GATACTATAT TGAACATTCA CAAATTTGAT
161351 CAGCAGTTAT TAGGTGACCA TTTAGATGCT AGGTTGGCAC ATTTAATAAG
161401 CAGTTACTGA GTGCCGAATA AAACTAACAG CTAATATTTA TAAAACCCTT
161451 GCAGGTGTCA GGCTCTGCTA TGTATCAAAC ATTCTCACTT AATCCTCATA
161501 ATGACATTAT GAGGTGAGCA TTATTTACAC CACACTTTAC CTTTGAAGAA
161551 ACTAAAGTTT GAAGAGGCTA ATGAGCCTGC ACAAGGCCAT TTAGCCATAT
161601 GTTGGATTTG AGCCTCAGAT TGTTTTTTAA TCACTAGTTC TACCATCTAT
161651 GTTCAGAAAC ACAGTGTCTG ATCTCACAGA GTTCAGAGTT TTGCAGCCAG
161701 AGAAAACTAG AACTGAGTTT GGCAGAAGAG TGGGTTTGGG GGTAGCCAGG
161751 GGAGGTAGGT GCCTGATGGG AGTGGGTGGT GCCCACAAAT CCTGACTGTC
161801 ATTTCTCTTC TACTCATCTG AACTTTAGGC TTATCCGTCC TGCAGAAAGT
161851 CCTGGATACA GCTGCTGAGA AGAACTGGCA GGTGACAGCA GTCAACATCT
161901 TGACAACCAC AGAGGAGGGA TACCGGATGC TCTTTCAGGA CCTGGAGAAG
161951 AAAAAGGAGC GGCTGGTGGT GGTGGACTGT GAATCAGAAC GCCTCAATGC
162001 TATCTTGGGC CAGGTAGTGA AAGCAGCAAG GGCTCAGGGT GGGTGCGGGA
162051 GGTGATTCAG GAATAGCCAG ACACACTTTT GCCTTGGGTG TTATAAAGAG
162101 GGTTATAAAG AGGGTTCTTG ACTAGGTGAG ACTAAAAGAC CTCTATCTCA
162151 TTTTCTATAA TTCACAAAAT TTAATTCTGA AATAGCACAA ACAATGGGAG
162201 CCTTGACATA GGGCTTCAAA TGGTTCTCAA ACCTGTTAAC TCCAATGTAT
162251 CCCTCTATTG TTTAAAAAAA AAAAATGCTG GATGCAGTGG CTCAGGCCTG
162301 TAATCTCAGC ACTTTGGGAG ACTGAGGCAG GCGGATCACC TGAGGTCAGG
162351 AGTTCAAGAC CAGCCTAGCC AACATGGTGA AACCCTGTCT CCACTAAAAA
162401 AAAAAAAAAA AAAAAAAAAT TTAGCTTGGT GTCGTGGCAT GTACCCATAA
162451 TCCCAGCTAC TCAGGAGGGT GAGACAGTGA GGCAGGAGAA TCCCTTGAAC
162501 CTGGGAGGTG GAGGTTGCAG TGAGCCAAGA TTGTGCTACT GCACTCCAGC
162551 CTAGGCAACA GAGCAAGACT CCATCTCGAA AAATAATAAA AATAATAAT
162601 GATAAATTAC ATTCCATTTT AGAGTTTATG AAATGTTATC ATATTAGGAA
162651 CACAGCTTAT AGGGCCAAAT TTCTGGGTTC GACTCTGGAC TCTGTCACTC
162701 ATGATCCAGG GTTTGGCATC TCATTCCTTT CACCTTCTTA ACTGTTTTGA
162751 AAGGCTAAGG AAGCAGCAGC CACCTTTATT TCCATTGTTT CCCTGAACAT
162801 GCCCTTCCCT TTGAGAAATC AATTGACAGT ACATTCTTCT ATAAACAGGC
162851 ATTGTAACTT CAACAGTCTT GAGCTAGATC TCTCTAAACT GTGCTTCCCC
162901 TGGTCTCAAA ACAAAAGCCC ATGCCCACCA CAGAATTAGG ATTTTTTGTA
162951 GATTCCTTAT CTTTTTAAAC TACATTTATG TATTCAGATT CAGAGCTAGC
163001 AAGGTAGCAG ACGTTGCAAT AACTTTTGAA CAATGTCATA CAATAAAATT
163051 GATAGTTTTA GGTACTTGAC AACATGACAA AGTTTGTTAA TGGCCTTCAA
163101 GACCCCTGGG GCCCTCACAG AGAATCTTGG TACTAGGACA GCTATTACTC
163151 AGAGGCCTCA GCAATAGAAC ACAGACAGAG TTTGAATGTT ATGGATTCTT
163201 TAAGGCACTA ACTGTTCTAC TTTATGAAGT ACAAATTTGG CCTTCCCTCT
163251 TGGAAAGAGA AACCCAGCAA AACTTGTTCC ATTGAGATGG AAGTTCTCTG
```

FIGURE 3, page 46 of 122

```
163301 GGCCGGAGTC AGGGATTTGA ATTGCAGTTT TCAATTCAGG CAGGATAAGA
163351 TAATAGTTAA GAGCAGAGAT AAAACCAGAC TGGCTAGGGT TCAAATCCCA
163401 GCTCTAGTAT TTACTGGCTT TGTGACCTTG ACCAGGTTTT TAATCTTTCT
163451 ACATCTCAAG TTCTTGATCT GTAAAATGGG CATCATCATC ATAATAATAG
163501 CCACTTTTAG AGGGCTCTTG TGAGAATTAA AAGAATCAAT ATATGTGAAG
163551 CACTTAGAAC AGAGTCTGCC CCACAGTAAG TGGTACAAGC AAGCATTTGC
163601 CTATTTTTGC TATTCCTAGT GCCTACTAGG ACCAGCTTCT TGAGTCACTT
163651 TCTTCCTTGG GCATAAGTGA ATCCGTCTGT AAAATGTGAA TGAAGGCCTC
163701 TGTTCTATAA AACTGATAAA AAGGCAAGAT AACATAGTCG ATGGAAAAAG
163751 TGCCAAATGA TAATGACATA TTAATAGACA GATGACCTAT TGTATATTGT
163801 TCTATGGTAC AGACAGTAGC TATTACTACT ATTTTTTTAG TGTGTATGGT
163851 ATACCAGATA CTATGCCAAG ACCTTCCCAT GCATAATCCT ACTTCATTCC
163901 CACATCAACT TTGTAAAACA GCTTTTTTCA ATTCCCCTAT TTTATAGATG
163951 AAGAAAGAG AGATTATACT TGCCCAACAT CTCACAGCTA GCATATGATA
164001 AAAGCAGGAA GTCAAACCTA TCTTGGTCTG GCCAAAGAAC CTAGCTTCTT
164051 AAAAATGCAA CTTTTCTGCT TCTGCTATCT ATAATTAACT CCTCTCTCAA
164101 AGGGCAAACT TGCGTTTTGT AAAGAAGTGA CCCGTTTGTA TGGGTATTTT
164151 AGATTGTAGC ATATTGACAT TTTTTAAAAT TGTTTCATTC ATCTATTTTG
164201 AAAAGTAAGA CCAAAGAGTT GAAAGGATTT TACAGATCAC TTGATTCTTT
164251 GCTTATGCTT ACATTTTATA GATAGAATGA CTGACAGTCA AATTGATTAA
164301 GTTATTTGCC TTAGACAAAT AATGAATGAC AGTAATGAGC CTACAACTTA
164351 TATCTCTGAC TTACAATCTC ACACTTAGCA TCATCCTGGA CTATCTCACA
164401 TTCAGTAACT GGGAACGTAC CTGGGATACA GTTACATTCA GTAACTGCAT
164451 ACAGTCTAAC ACAAAATTTT CCACCTAATC TGAGGAAAAA AACAGTGACT
164501 CAAAATTCCA AATAGGGAAT TAACTGCCTG TGTCTGTCTC CAGCCCCCAC
164551 CCAACTAAAA TCTAAGCTCG ACGATGCCAG GGATTTTTGT TTTATTTTCT
164601 TCCCTGCTGA GTCCACAATG CCTTGGATAG TGCTTGACAC CAAATAAAGT
164651 ATTCAATACA TTCTTTTCAG TGAATTAAAA GAATAAGGAA TCAATGAAGC
164701 CTCTAAGAAA GTTCTTAAAT GTAAGATAAA TCTGGATTTC TATAGATAGC
164751 CATTGGCTGG ATAAGAGCCT TTAAGATGGA GGAAAAGGCA TGTCAGGAGG
164801 CCCAGAGGGC ATGTGAGGGC TGGGTTTCAT ACTGCAGTTT TGCAGGCTGA
164851 GTGATGGATG CTGAGCGTCC ACTGGAGAGG ATGGCAGGAA GATAAACACA
164901 CAATCAAGAA TATCCTTGGA AACCATTAGA AAGAGTTTAG GGTTTATTCT
164951 GTAAACAATG GGGAGTCAGT GAAGGTTTGT GAGCAAGGAA CAGGATTATT
165001 AGAATATAAT ACTTTATCAA TATATGATGC CAAAGCATAT AAAACAGTCA
165051 TTAAGCACAA AATTAGTTAG AAGTGAGAAT AGACCAGGAC CTGTTGAGGT
165101 TATCCATCAC ATCCCCCTAT GTTATTGTCT TCATGGTGCT TGTACCTGCT
165151 GAAATCTTGT TCATTTATCT ATTTATATAT TGACCATCTG GCACCCTACT
165201 AAAATGTTAA CTCAACTCAA TGAGGGCACA GAGACCTTGC CTCACTTGCT
165251 CAATGCTGTT TCCCCAGCAC ATAGCATAGT GCTTGGCATA TAATTTATGT
165301 TAAATAAATG TTTGTTGAAT GGATTAATTA GTTAATCATA GAGGGTTTTA
165351 CAGAGGAGTT GAGATTGGAG CTCAGCCATT AAGGATACGA ACAATCAGAG
165401 AGAATGGGAG AGGCCATTCA GACACAAATA TTGTGAATGA AGGCAATGCA
165451 TTGGGAATGA GCTTTGAAGT AATGGGGGTC AGTGAGGTGA TGGACCCCTT
165501 GTGAAATTGC TTCTTACATT TATAACACCT TTCTCAGTTT GTTACCCTGT
165551 ATATATTTAT CCGTTCACCT ATTTATTATG GATCTCCTCT CAATGAAGTG
165601 TAACCTCCAA GAGGGCAAGC ACCATGCTTC TTTCACCTTT CCACTGTGTT
165651 GCCAATAGTG CTTCACCCAT AGCAAGCTCT TAATACATAT TTGTGAAAGG
165701 AAGGTATTAG AGGAGGGAAG GTCAATGTAT AGGTTGGGGA ATAGATAGAT
165751 GGGAAGGTTG GTATCAGGTT GGATCATATG AAATTGCCAG TTTTTATAAG
165801 TCAAAAGTCA TCAGTTATCA GCTGTTTCCT TTGTTTCAAT TTGTACTTTC
165851 ATCTTGTGGG GACAATATTT CTCCATTGCC TGAATGTGGT TGGTTTTAAA
165901 ATATCATGTC TTTGCTGTTT TGTGTTTATT AGAAGCTGAA TAGGTTCTTG
165951 ATAAAGGTGT CTCATTGTTG AAAAGGCAGC AAACCATTTG ACAAGCAGAT
166001 GAAAAAGTAA TGAAGAATTA TTAATAAAAC TATCATCCCA ATAGTATTTG
166051 AGCTCCGTGG TCTGGAATTT CACAATCTAA CCACTATTTC AAAGAATTCA
166101 TTGTGTGTGC TTGCATTTAA TTATTCCCCA CATAAAAAAA CATGAGTCAC
166151 TATGCACATA CATCCAATTA AGTAGATGTC TGAATGTGGA TTTTAATAAC
166201 CTTGAAAATT TATTCAGTTA GAGAAGAAGC CCAAGTGCTT ATCATCTGTT
166251 ATATGTCTCC TTGCAACAGT GCAGGGAGAG AGACACCGAG CAGAGTACAC
166301 TAACCCCAAT TTGATGATTA AAAAAAATAG GGAATTAGAT CTAGTTAATC
166351 TGCAGGCTGA GCTAGATCTA AAACCAAGGT CTGTAGTCTT AACCATTCAT
166401 TATTAGGTGT GTCTCCTGCC CAAGCAAACT TCTGGGCAGT TCTTTCCACA
166451 AATATTTTTT CTACCTGTGA TGATTAGGGA TAGTCTGCAT TTTGGGATAA
166501 AAGGGTATTC ATTGACACTG GTTCTTAATG ATTAACCATA ATCAAACATC
166551 AAATGGAAAA GTTCACAGGA GTCAGGTCCC TGTCCTGATA CTGCCACCAG
166601 GCTACTATCA GATCTGGGCA AAACATTTTC CCTCTGTGGG TCTTGACTTC
166651 CTATCTGTAC AGTGAGAGTT TGGACCAGAT GATCCTAACT TTCCCTTCCA
166701 GCTTCTAAGT TGGGCAATCC ATTAATGTCT GAGTACCTAA CTGATTCGGG
166751 GAGGAAGGCA CAAAATTCAG AAAAAGAAAG AAGAGCATCT ATATATGGTT
166801 CATGCAAGGA ATTGAAGGTG AAGTCATCCA CATACCCATC TGACCATTCA
```

FIGURE 3, page 47 of 122

```
166851 TCCACCATCC ATCTATTAAC TCATCTGTTT TTCCAATCAG CGAATATTGT
166901 CATGACAGAT TTCATGCAAC ATAAAATTCC CACCTAAAGA AGAATCTCCA
166951 CATACAAGGA AGGTTTATGA AAGAAAGAAC GCAGTGAGCA TTTCAGATGG
167001 GTCCTTGGGG TTACAGTAAC ACCACTCTAC CCTTGGAATC AGACAAAACT
167051 GATTTCAAAT TCTGTATCTG CCACTTAGTA GCTGTAAGAT TACAACTTAC
167101 AGAGGTTATA TAATAGGCAG TCCATGCCTA TTCCTTATTT GTAAAATAAG
167151 GATGCTAACA ATGCCACCAT CATTGGATGG TTGGGATATT GTAGTTCTAG
167201 TACTTAGGGT AGGGCACATT GTAAGCACTC GATATCAGCT GCCGTTATTA
167251 CTGTTGTTGT CGTGGCTTTA ACTGTTAGTA TGATTAATGA GTCTCCACCT
167301 ATTATGTTTT GTAGATTATA AAGCTAGAGA AGAATGGCAT CGGCTACCAC
167351 TACATTCTTG CAAATCTGGT GAGTAGAGCA CTGCAGGCTC TCAGCTCAAG
167401 TCCTTTCCAG GTTTGGGGCC CTACCTTGCT TCTGTTGTCC CTGGCTGATG
167451 TGAACTGAGT GGGTGGAAGG GGCAATTCAG GGCTGTAATA ATGAGTCTTG
167501 GCAATACTAC ATTTTTATCT TCTCCACATC CCACTCATCA AACCACAACA
167551 CACTATTCAT GAACCTCTAA CCTTCCTTGG AAGAGAGCAT ACTGGTGGGC
167601 ACGGCTTTAT CATCTTCACA ATTCCAGCTT TAATTGGCTC TGCCCCTTGG
167651 CAATAGGGAC AAAATCACCA CATCTTTGAA TTAATGCAAG ATGTCTTGAT
167701 CTTACTGGTT TGGGTCCTCC ATTTTGACCC CAGTGATAGT TTTACTTCTT
167751 ATAAATACAT TTACATCATA ATTACACTAG TATTGACAAA ATTTTAACCA
167801 GAAACAACTT CCCAGCATGA ACAATATTAT GTCCATTTAG TTTATATTCA
167851 CTTTTCTATA TGGCATAGAT AAGTTTGTTT TAAAATATAT ATATATATAT
167901 ATTTGTTTTA ATGTACTACA GATCATTGTA TTGAGTGCTA CTGTTTTTTA
167951 TATTACAAAG AAAACAACTC ATCAAATCAT TTTTTGTATA TATTAAATTT
168001 TACCTAGTAG CACATACTAT TATGAGTTTT CTTTTGTAAC CATTATTTCT
168051 GTCAAGTCTA TTTTTTCTGG GTCATGTTTT GTACCTCCAC CTTTTTTGTC
168101 ATGAAGTTTA ATTCTTCTAG CTTTTCTATC CAAAGCCAAA TGTATTTTTA
168151 TTTGGTGTTT AGCCCCATTT TTAAAGGCTT TATTGAGACA TATTTTATAA
168201 AGCACACAAT TCATCCATTT AAAGTGTACA ATTAAATGGT TTTCAATATA
168251 TTCACAAAGT TATGAAACCA TCACCACAGT CTTATTTTAA AATTCTTCAT
168301 CACTGCTAGG AGAAATCCCT TACCTATTAG CAATGACTCC TTATCATCCC
168351 CTAAGCTCCT CCAGCCCTAG GCAACCATTA ATTTACTTTC TATCCGTATG
168401 TATTTGCCTG TTTGGAGCAT GTCATATATG TGAAATCATA CAATATGTGG
168451 TCATTTGTAA TTGACTTCTT TCACTTAGCA TAACATTTTC AAGTTTCACC
168501 CATGTTGCAG CATGTATCAG TACTTGATTC CTTTTTATTG CCAAACAATA
168551 TTTCATTATG AGCATATACC ACATTTTCTT TATCCATTTT TCAGTTCATG
168601 CACATTTGGG TTGTTTTCAC TTTTTGACTA TTATGAATAA TGCTGCTATA
168651 AAATATTAGT GTACAAGATT TTCACTTTAA TATATACCTA GGCATGGAAT
168701 TACTGGGTTA TATGATAACT CTATGTTTAA CATTTTGAGG AACTCCAAAA
168751 TTATTTTCCA AAGTGGCTGC ATCACCCATC AAATTTTAAT CAATAACAAA
168801 TTTTTCCATG TGACAGTTTG AATGATGGCA AGTGTCTCTT AATGATAACT
168851 ATTTCTACAG TTTATTATCC TGTTCTGTCT TTGCAATTTT CCATGTTTCC
168901 ATTAAGAAGT GGTTTCTAGC TTTTTATCTA TAACGAATTT TCAGGTTTTA
168951 ACTTACTTAA CTGAACATAT AACTGGCTTC AGTTTTAACC ATGTTATTTT
169001 GTGTTGATTA TCTCTATGAG CAATAGTAAT TGAACAAAGG ATTAATATTT
169051 GTTACTCATT TCTGGAGTAA AGTCTGTTAG TAGAAATAAG GCACAGGGTG
169101 CATGAATCTA AAAATGTGAC CAAAGCATCC TGCCTAATCC ATAAATTCTG
169151 TCCTTCTTTC TGACCTGGTA TCCAGCCTTA GATAGATCCC TGCCTTACTC
169201 TTCTTTCCCC TTCTTCAACT AACTTGTCTT GGCAATATTT CGGAGTGAGG
169251 ACTTGAAATA AGAAGGGCTT AGAGAAGTAG GTTAATTTAG GCCCAGCTGT
169301 TAATGGCTAA ATATATTACC TTTCTCAGAG GTATTTGCAT TTTAAATGAG
169351 GGTGGCTCTC CAGACACTTT TGGGGAACGA AGAGTCTCAC CCTCCAAAGA
169401 CCATTTGCAA AAATGGAATT TTTGACTTCG GAGTGAGGAA AGCCCTTAAC
169451 ATCCCTTGAC TCCCAGATCC TTAGTGCTAG AGCGGACTTA GGAAGTCAAC
169501 TCCACTTAAA CCTCACTTGT TTATAGGGAA ACAACCAGCA AAGGGGTGTG
169551 ACTTGGCCAA GGTCACACAG TGAGGCAGCA CTAGAGCTAG GCCTGTCACC
169601 AAGGGTAGCA GGCAGTATTC AGGCCTTTTC TATAACTCCA GGTCATCTCT
169651 CAGTGAAACT TTGTAGGCAC CCTGCTGCTT AAGAATACAC AGAACAATAC
169701 ATAGAACAAG AATACACAGA ACAAGGGTGG GGATAGGCAT AATTACCTCT
169751 CTGGGGTGAG ATAGAAATTG CATGCCAGTG GCCTTAGAGA CACTGAAAGA
169801 CCCCAGGTAA TTACATTGCC AGCCTCCATC TGTTGCCAAG TAACCCCTCA
169851 GTCACAGCAT CACCAAGTCA GCCTCTTGGG TTGTTGTATC CTTCTGATCT
169901 GCATTTTTCT TCTTCTGACT TAATGACCTC TCAAATGCTT ACAACTGCCA
169951 GCTAATAGGA TGAAAATTGC ATATACCATC CAAATAAAAA AGACTTGCAT
170001 GTTTCGATAG ATTAGTTGAT AATTAGGCTT CAAATTACTA ATTAATTCAG
170051 TTTGAAACAT AGTCGCAGTA TGTGGTGTGT TTTCTTCCCC CTTCAGAGGA
170101 ATAATGCAAT TCATAAGACG ATAATTTTTA GAATTTCTGC CACATAATTA
170151 GCCTACTGCT GCATAGAACT GACCCACTCC TTCGGAATGT TTGTGATTAG
170201 GGTGTAATTA TAGAGTTAGA GACCAAGGAA GGCTTTGAAA GATTTAACAA
170251 AAGGAGGGAG CTACACTTTT ATTTTACAGT TCTTTCTGTC CCTGTCGGAA
170301 TGCATGAGCT TCAAAGTAGC CAGCAGCATT CTTTTAGCAG ATCACTTCGG
170351 AGGAATGCTT CTGGGGTTCA AATAGCCACC TTTGAAGGGC TGCCGGAAGA
```

FIGURE 3, page 48 of 122

```
170401 GAGGAGGGGA GGAGATTGTA GGTTAGAGAA GACAACTTAT AGGCAAGGAG
170451 TCAAAACAAA ACAAAACAAA ACAAAAACAA ACAAACAAAA AAAAAAAAAC
170501 CTTGTTTTTT GTCCAGATGC CCCTTTTAGC TGGCTCTGTA TTCTTGGACA
170551 ACTCTCCAAT CCTCAGTTTC CTCATCTGTC AATTGAGAAC AATAATTCCT
170601 ACTCTACCTA CTCATAGTGT CACTGGGGAG ACCAAATATG TTGCCAAATG
170651 CACCATGCTT TAAAAAGTTA AAAGTGTTCT GCACAAATGG AAAATTCTTA
170701 CTTCACATAT TAAATCCGCC CATCTGTACA TATTCACATA TGGTGTGTAT
170751 GTACATATGC ATATATATGC TTGCATATAT ATCCATATTT TATAGGAGAG
170801 ATATGTATGT TTATTTCCAT AGCATTGGTG TGGGCATAAG ATGAACTTGA
170851 ACCATGCAGA AATTGGAAAG CTATGCCACT ATCTCTCACA GATGTGCCTG
170901 GGTCCTGGAA CACACAAGTG CTGAGCCTGG CTGCCAGTGG TCCTCCAAAC
170951 CCTAACACTG ACTGTGCATT CACTCCCTGC TCTGAGACTG TGGGGAGTGC
171001 AGACATCTGG CAGCCAGAGT CCTTCAGAGT TGTAGTTCTT ATCTTTGTGA
171051 CTCACCAGAA GCAAATCTTA GACCAAATGA GTGTTTCTCA AAACAGAGGA
171101 CCTGTGGACC TCTGTAGTGT TTCTGTAGAG CCAGTTTGGA AAATGTGGCA
171151 CCAACAAGCG AATGCTTCAG TGCCACTGCA ATTGCCAATA TGAGTACCTA
171201 AACCATGGAG TAAATGGTCA GATTGTTATA CTGGTATTTA GAATTTTACT
171251 GGAATGAAAG CACATATTTT AAAATTCTCA TAGAGAACTA GAAGATTGGG
171301 AGAATTTACA CAGGGTTCAG CAGACTCCTG TCTGAAAAAT ATTGAATTTG
171351 TTGGACAACA TTGACCAGTG TGAACAATAT GGTGCCTTCT AGAGGAGTAA
171401 TAACAATAGT AATATCAACA ATCTCTCTCA TTTTTATACC ATATTATAGT
171451 TTATGTGATA TTTCTGTATG AATCATACTA CCGGGTTTTG GATGTCATAA
171501 TACTCCTATG AAGTAAACAA GGTGGAATTC ATCATCCCCA TTTTACAGAT
171551 GTGGGAACTG AGGCTGAGAC ATTACATGAC TGAGCTGCAG AGGAGAAAGA
171601 CAGGAACCTA ATTAATGGAG TTTGGCTGTC AGGAATATGA CAAAAACCAA
171651 GAGATGTGGG CATAAGAATA AGATGATCAG GCTAACCTGA TGCTGAGACA
171701 CTTGAGTCAC TGAATTAGAA TTCCTTAAAC CCCTAATAAA TTACAACAAT
171751 AATAACAATG GCAATAACTT CCACAATTGA CTGATTGCTA CATTCTAGAC
171801 ACTATGATAA ACACTTAAAT GCATGTCAAT TAAACCTTCC CAATAGCCCT
171851 TGAGGTTGAT ATTATCCTCA GATGAAGAAA CAGAGCTTCA GAAAGGTTGA
171901 CTTTTCCACA GTCACAAAAC ATATAAAGTG ATGGAGCTGC ACTTCTCCTC
171951 AAGGGCCATG GAATCCCAAA ATTTGTGTTC TTATTACCGT GCCATGTGAG
172001 TGCTGGGCAG GGAGAGTTGG GGAAAGAGTC AGGAAAGAGA GGGGGTTGTC
172051 CTGGACAAGA CAGCTTGAGT TTAAATCTTG TCTACAGTAG CAGCAATAGA
172101 TCTGACATTC CAACCCAGGC TCTCAAATTC CCATTGGACA TCTGTCTCAC
172151 CATTTACTCC ATGGTTTAGG TACTCATATT GGCAATCGCA GTGGCACTGA
172201 AGCATTCACT TGTTAGTGCC GCATTTTCCA AACTGGCTCT ACAGACACAC
172251 CACAGAGGTC CACAGGTCCT CTGTTTTGAG AAACACTCAT TTGGTCTAAG
172301 ATTTGCTTCT GGTGAGTCAC AAAGGTAAGA ACTACAACTA CATTGATGGA
172351 ATTTTATTAA AATTATTATT TCTAGTGTGA CAGAAGCTGA GGAAGAGATG
172401 ACGGAGTTAG CCCATTCCAG GTCTTATCGG GGTACTTGGG AACCAGGACA
172451 GTTGGCCATT TCTGCCATGT GCTTGCAGAT TAACTCCTGT AGAATGTTAG
172501 ATTGGAAGTT TTAGTCTATT TGGCAGCTAT TCCAAGCCCC CAGCCCCATG
172551 CTGCTGCTCC TCTGCGGGAT CAGCCCTGAG CAGAAACTGT TCTTTAGTCT
172601 CCTTGCTCCC CTGTGGTGAT AAATCTGTCA GCTCCTTCTG CAAAGCTGAG
172651 CTCATCCACT TTCTTCAGTG CCTCTCTTCC TGTTGGCTCC GTACCTCACA
172701 GTTATGTTTA GTTTCTGCAG CTTCTGGTTA GGCAGGTGGT ATAGTAGTTG
172751 GGAAGGGTGG CTTTGGAGCC AGTTCTGGGT TTGAATTCTG ACTTTTATAC
172801 TTATTAGCTA TGTAACATTA GTCAATTTAT CTACCTTTTC TGAGTTTTTG
172851 TTGCCTTATC TTTAAAAAAG AGAATGATAT TATGTACATT CTTATAGGGT
172901 TTTATGAGAA CTAAGTGAGA TCCCTCAACG CTCTCGGAAA TGAAATCACA
172951 TCTACCTGTT TTATGCTGCC ATAGCCCCAG ATATTTTTTC ACTTACTATA
173001 CTTGAGATTA GATAACTGAT TCTCTATTAT TTCATGTCTT CTTCCCTGTT
173051 TATCTACAAG CTCCTAGAGG AAGGATTGTG TGTGACTTAT TCTCTGTTGA
173101 ATTCCCAGGG CCTGGCGAAG TGAGTTGCAC ATAACAGGTG TGCTTTAAAA
173151 AGTCAATGAA TGAATGAATG AATGAATGAA TAAATGAATT CCTAGAAAAT
173201 AATGTCTGCA CCTACATATC AAATGTACTT AAAGGCAAAA TCTTTTAGCA
173251 CCTATGCTAG AAGAAGTAGA GGTAGTAGGA ATATGAATTT AGTTATGAAT
173301 ATGCAAATAA GTAGTTAAAG ACAGGCCTAA GAGGCCTTCT AACCCACTTC
173351 ATGTAGAGAG CCAGAATCTC CTCTACAACG TCCCCAACAG AAACTCAGCC
173401 ATCAGGTTCA TGCTTGAATA ATACCCAGTG ATGGAAAAGT CCTACCTCTG
173451 AGACAGCCCC TTTTCTTCTC AAAGGGCTCA GACAGTTTCT GCACTCTTCC
173501 TGGAACAGGG CACGACCTGT GTGCTGCTCA CCCTGTGTCA CTCTCTCATC
173551 ACTTCTGACT CTAATGCCCT CTGGCTCTTG CAAAACTTAC CTGTGCCTTC
173601 CCACAAAGCA GCCTTTGAGT ATTTGAAAAT GGCTACCTTG CTTACTCTTT
173651 GGTGTTTGCA CCTTCAGTCT GGACACACCC CTGTTCCCCC AGTGCCTTCT
173701 CTCAGGATGT GGTTCTTACA GCTGTCCAGA CAACCACCAA ACATGGACCA
173751 GGCCTGTCCG TATGCCTGAT ACTGCACTGG GCTCATGCAA GAAGGACTAA
173801 GAAGCATGAG GCTGAACTTT GTCCCAGAAG CAACCTGACC TTTTCTTCCA
173851 GCTAGATTAG AACATGTAAA ATAACATTCT CAAAAGAATG CCAGAGAAAA
173901 ATCACAGCCT GTGAAAATAT CTAAGCCTCA TAGATGGCCA CCTACCCTGT
```

```
173951 CACAGTGTGG TGATCAGAGG CCAGGGAGGC CGCCTCAGCT GTGGGGTGTC
174001 TGGGAAGGCT CGTGAGGCTG CATCTACAAG GCCAGCAGTC ATGTAGAGTG
174051 TGCCCTCCCC CTTGTTTGAA GAATCCAGCG GAGTGAGAGC TGAAGGGTAC
174101 CTATGAAACT CATCTCACCC GGCGCCTCAT TTTATAAAAT AGACACTCAA
174151 GAATGAGAGA AAGGAGGTGA TCTGTCTGAA TTCACCCAGA AGTTAAACAG
174201 CAAAGCTGGG CTAGGATTTG GAGTATTCAC TTGCTCCTTC TTTGTGGCTT
174251 CTTTTCTCCA AACTGCCTTT TCACAATGTG CCCATATGCC TCTGTGTTGA
174301 GGGTGGGGCA GGAGCAGAGA CAGAGACAGA GACAGAGAGG GAGCTCAGAA
174351 GTGCTTCCTA CTCCCCACTG TGCCCCTCTC AAGGACTCTC TTTGCTGATG
174401 AAGCTTATTC CAGTTTCCTC TTCTTCCTCC CACACAGCCT TCCCTCTCCC
174451 GCTCTGCTCT CACCTCACTG TTCGGTAACA GACACTGTGT GATCTCCAGA
174501 GCTGACACTG CCCAGAGCCT TTGGAAGGAA AAGGAGAGTG GGTGGATAGA
174551 AAGACAAACC CCAGATGCCA AAGGATGCTG TCTTCCAAGG TGATCCAAGC
174601 ATCCCAGTCT AGGTTACTCT TTGTATTCAC CCCCATCCTC TGAGAGAATT
174651 CACCCCAGAG ACCTCTGAGA TTTTCTGCCT CCCTCCAAGA AAAGTAAGAT
174701 TCTGGTCCCA TTTTATAAGG AGAAAAATGA AGTTCAAGTT GTTGAAAAAC
174751 CTTTTGTAAA GTCATTTGAC TAAAACTGGA ATTCAAACTT AAAACCTTTC
174801 CCATTCTAAG GATTAGGCTT GTTCTCCATT GGGCCACACT GCCCAAACTG
174851 GGGAAACCTT TGCAATTCTT AGGACTGGTA TTATAATTGA GCAAAGCCAA
174901 GAAATAAACT CCTTTCTTCC TTAAACTGCC TGGGTTTGAA ATCTGGCTCA
174951 GCTACTTACT AGCTGTTTGT CCATTGCAAG TCACTTCTCC TCTTTGTACC
175001 TCAGCTGTCT CACCTATGAG TGGGAATATT AATGTGGATC TCATAAGATA
175051 AAGATAAAAT GAGTTAATGT ATGTAAAGTT TTAGAACACA GAGTGCAACA
175101 GAAGCCCAGG GTCTCATCCT AACTCTGTCA CTTACTCATG ACCATTTATG
175151 CAAATCATAT TTTTCTGTAA GATCTCAATT TGTTCTAGAA TTGGCATAAT
175201 GTTTTCAAAA GGAAAAAAAT CAGCAAAACA ATCTTCCTGC CTGTGTGATT
175251 TAGGGTTCTA GTTTTCCTGA TTGTCTTCAG TTCAGAGGTA TCAAAAAATA
175301 TCTCTCATAG CCACACTGGC TCCCTTAAGC TTAAGGAAGA GGCTGTTCTA
175351 TTAATCTCAA GCACTTGGTG TGTGTATCTT TCGATCTTGC AAACCATGCA
175401 CACCTAGGCT GATTTGGAAT GGCCTTTTTC ATGCTGGGTC AGCATCCTTT
175451 GGACCATTTC AGATATGTAA GACAGTGACT ATGATTGCTC TGACAGAGCA
175501 TGGAAACTCA CTGTCACCAG CAGCCTTCAA GCAAGAGGGG CCCCTTAGCA
175551 CTAATTTTGG CAGATGGTTG GTGAGCTATG TAACTAGAAG AGTCTGGTCC
175601 TTGTTTCCTT ACCTATCCCT CTTTTTAAGA CAGAAAAATA GAGAATACAA
175651 TGGGAGGGAA ATGGAGCTCC AGGAGACACA GGATTTTAGG TAAATACTTA
175701 CTATGTGCCA AGCACTGTTC TCTAAGAATC TGACAGGTAA CATAGTTAAT
175751 CCTCACAACA GCTATGAGAA ATACCATAAT AATCCTTATG TTGCAGCAAA
175801 GGTTACTGAG GCACTAAAAG GTTGAGTAGC CCTCCTGAGG TTGCACAGCT
175851 AGGAGGTGGT GGAGCTAAGA TTTGAATCTA GGCTGACATG CACAGGCAGT
175901 TTCTGTGACA GAGGGCAGTA ACCCTCTGTG GCTCTGACTC TGAACCTCAA
175951 TACATGCATA TTTTCTGCTT GGTGTTCCCA GCCCTCTTCA CCCAACCAAA
176001 GGCACTTTTT TTTTTTCAGG CTTCATGCTT TTGCTGCAAG ACCTTCCCTG
176051 AGCTCCAAGA TCAAGTTTGG GTCCACTCAT TTTGCTCTAT AATTACTTGT
176101 GTAATATTGG CCTTTCTCAC TAGACCTTAG GTAACTTGAA AGCAAGGACC
176151 ACACCTGTCT TCTTCTCTGC TACATTTCTA TGTATAGCAT GGGCCTGACA
176201 GTGTTAAGCA CTCATGAGTG AATGAGTAAA TGGACAAATA AATGATTTAC
176251 TACAATATTT CTTACCTGGT TCCCAGTAGC TTTCATATTT ATCATGTTTG
176301 GACTTTCATT CTTCTTTTTA TCAAACATTC AATGGGCACC TACTATATGG
176351 GAGGCCTGTG AAGGTGTAAA CCGGCTTTTC ATCAAAAGAT GGGCATGCTA
176401 TGAGTATTTG CTTGGCCTTT TCTAGTAGAG AAGGTTTTGA TCATGTAAAG
176451 GGTAGATGCA ATTGGTTTTA AGTCCACTGG GAACTGTAGC CATAAGGGCC
176501 CACCTCATAC CAGGAAATTT GCTCTTGCTC TGAAATGGCC TTGGCCAGGT
176551 GTCATTCCTG ACCACAACAG TTGGGGCAGA GTAAAGATGA AGGGACTCTC
176601 TGGAAGACCA ACTATTCCCA GGCCAGGTAG TACACCCATG CAGCCTTGCA
176651 CTCAATAGCC CAACCTGGAG TCCCTGACCT TCTGCCAGAA AGTGCCAGCA
176701 TTTTATCCTA AATCCCAGGG CTGAGAGAAA TTAGTTTGTG AGACCCTGAC
176751 TGACATTTAC AATGCTTTGT CAATACTGCA TACTTGTATG AGGTATGTCT
176801 GTTGGTGTGT TTGCAGATAT CCAAGTGTGC CTCCCTGGTT CCAAATGTAA
176851 CTGGATAAGT CAACACGAAT GCTTTTTTCT TCTCAATATT TATGGTGTTT
176901 TCACTGATTT AAGCACAGCT ACAATACCTT GTTTAATTAG AGGAAACCAG
176951 ACTACCCTCT GTGTTACCAG AGATTATATA GGGAGAGGAC ACCTTAAAGG
177001 TTTGGTTGGT TAAAGTGGCT AAAATAGGAA AATGTGAAGA CTTTTATGCA
177051 GAGACATGGG TATTTGAGGA CACAATTAAG TCTTCAGCCC AGGAGTATTC
177101 CACAAATTCA CACATATCCA TATTCATGCG CACATACCTG TGTGATCATA
177151 GAATTGTAGA TCAAAGCTGG AAGAGCCCTT AAGAGAGAAA TCAAGTGGCT
177201 CAGAAGTTTC CAAACTTTTT AGTTTGAGGC TCTATTTTCA AATGGAATCT
177251 TGGGGGAGAA CTCTCATATA TAAAACAGAT AAAAAGCAGA GCTACTATGG
177301 TGGAAAAGAG AGGGTGGGAT TTAGGACCAC ATCTTTCTGC CTTTTCCCTA
177351 ACCTAATATG GTAACTTCTA AAATGCCTGC AACCAGGAAC ATAGCTTATA
177401 AGATCATTGA TGTAGCCAAA GTTCTTATTT TGCAGATCAA TCAACTAATG
177451 GCTATACAGG TTGAGATAAT TGCCCAAGGA CAAACAACTC ATGAGATTCA
```

```
177501 AAGACAGGAT TTATGTGGTT CTCCCTAAAA CTCTTTTCCT GACACTTCTT
177551 ATTTATGACC TGGTTCACAA TAGACTACAC AAAAAAGTCA ATAAGAAGAC
177601 CTCTTTGATC CACAAGACAA AAGCTGAGGC TGAGTGGTGA CAGGATTGAA
177651 GCTTATAAAA AAATCATGAG AGGGTGAGAA GAAACTTTCT GTTCCTTCAT
177701 TCCTCCACAT GTATTGAGCA TGCACCCTGA TCCAGGTACT GCTTGTGGAC
177751 GCTGTGGGGG CCAACGTCCC TGCCCTCCAG GAGCTCACAG TCTCACAGGG
177801 AAGATGAGAA GGGCCCCTGC ACGTTCAAAG AGAAAGCTAG GAGAGGCCTA
177851 GAGAGATAGG AATAAAGTGC TGTGTGGTTC ACATTTCAAG TACCAGCACA
177901 CATTAAAGGA GCTAAGGGAA ATGCCCTGAT CTCATGGAAG CCTGATACTT
177951 CCTTCTTGGT ATAAAAATGT GTGCTGCTCT GAGTGCTTCA TTGCAGGACA
178001 GGACATAAAT GAATAGATTG GCCTCACTAG TGGTTGGGAG GCTTGATGTA
178051 CAGTGGTTAG AAAACAAGTC CTAGAGTCTT TTTACTTGTT GGTCTCTGTC
178101 CCTCACTAGC TATACTGTAC TGAGCAGGAG CTACTCCATT AACTTAAGCC
178151 TCAATTTTTT AAATTTCTAA TTTGCTAATG GGAATGATAA TAGTACCCAC
178201 TTTACAGGAT TGCTATGAGG ATTAAATGAG ATAACACAAA TAAAGTACTT
178251 AGCACAGTTT CTACTACACA GTACAGGTTT GATACGTGTT AGGTACTTGT
178301 AATTATTGTT TTAGCCAAAG TCTGCCTTCT ATGACATTTG CCCTTTCATT
178351 GGCTCTGGCC TGCGTTCCAG AGCCTCAGAG AACAAATCAT CCATCTCTTC
178401 CCCATGACAA CCCTTCTGGG ACTCAAATAC ATCCTTCACT TACTTTCTTG
178451 GTCTTCTATA CTTTTTTAGG CTGATAATTC CCACTTTTAA AAAAATACTT
178501 CTAATATAAG ACTTTTCAAA CCACAGTTTC CTATAACTAC TCTCTCAATG
178551 GAGCTGTCAT CTAAGATTTT ATCTGACAAT TTGGGGAAAC TTGGCATGTT
178601 CAACCTGTGC CATTCAGAGT ATACAGTACA AGTTCTTTGA TTTTTCTCTC
178651 AACTTACCTC CTGTGGATCT CAAGGGGATG GGATGGAGGA AGTGCTCTTT
178701 CCAGTGTCCC AGGATTTGTT TAATAAACCT TACTTGCCCG TTTCCTTGAA
178751 CAATGTTAGA TGCTCCTTCT TCCTTCTGAC TGGTGTGGTG TCAGCACAGG
178801 CAGGATGATG AGGGCTGAAC AGCTCGTATG TGACCCCTTG AAAGAATCCC
178851 AGAGCAAAGG AAATCCAGCT TTGAAGATAA AGCCTTTCAT CCTTCGATAG
178901 CTATGTTCCT ATACACCTGC TTCATGTTCT CTCAGGCTTC TTGCCTGACC
178951 CAGTCCCTGT ATTTGAAGCA GTTCTAACAC CTAACCTCTT TTGACCCAAT
179001 GATAATGATA ATGGTGAATG TGATGATCAT AATAATAGCT AACATTCATT
179051 AAGCACTTAC TATGTGCCAG ACATGGTACT AAGTGCTTAG TTTTATTAAT
179101 TCTTTTAAAC CGTTCACCAA TCCTGTGATG TAGGTGCTAT ATCTGCATTT
179151 TGAAGACCAG AGAACTGAGC CTCAGAGAGG TTAAGTAACC AGTAGACACA
179201 TATAATCAGT TCTTTTCTTT CCAATTGCAC GTGATAATTA ATAGTCATAA
179251 TGATGGCCCA GAGCCTCTTC AAGATTCTTA AAGCATTCTC CAAATCTTCA
179301 CAGCAAGATG AAAGCATGTC CAATGTAGTT GTAGTGTTAA ACACCTCTTT
179351 AGGATATCAT AATTACTTGA AATGCCTTTT CATTCTAATC CTTTGAAAAT
179401 TATAATTGGC ATATGATAGA TGGAGTGACT ATATTAACTA GTTTACTTAA
179451 TTGAGCGCAT TTACTCCCCA TCATTGTACT CAAATGCCTT TTCAACATTG
179501 TGTTACCTCC TACAGTGGAT ATACAGAGGA GACAGATTCT GTTCTCAACT
179551 AATCCTCTCA CCAGCCATAT AACCTTAAGC CACTATTCCC CTCTTTGGGC
179601 CTCAGTTTCC CTATCTGAAC AATATGAGGG GTTTGTTTTA CCTCCTACAG
179651 TGGATATAGA GAGGAGACAG ATTCTATTCT CAACCAATCC TCTAACTGGC
179701 CATATAACCT TAAGCCACTA TTCCCATCTC TGGGCCTCAG TTTCCCTATC
179751 TGTACAATAT GAAGGGTTTG GTCTTCTCTC CAAAATCTTT GCTCCTGTAT
179801 AGGTCAAAAG TCAGCAAACT ATGGTCCCTG TGTCAAATCC AGCCATCACC
179851 TGATTTTATA TGGCTCATGA GCTAAGAATG ATTTTTTACA TTTTTTAATT
179901 GTTGGGAAAA AAATCAAAAG AATGATATTT TATAATATGT GGAACTATAT
179951 GACATTAAAT TACCATGCCC AAAAATATTG GGACAGCCAT GCTCTTCCAA
180001 TTACTATATG CTAAATAGTA ATAGTAAATT ACTATTTTCT ATATATGGCT
180051 ACTTTCATGC TGCAATGGCA GAGCTGACTA GTTGTGACAA GAACCATATG
180101 GTTTGCAAAG CCTAAAATAT TTATAATCTG GCCCTTTACA TAAAAAGTTT
180151 GCTGACCCCT TGCATAGATG TGGAATAGGG GGACACTAAT AGGCTTCAGA
180201 TAAACTAGAC ACTTTGGAAG CATCTAAAGA CCCTTAGGAG GTTAGTGTCA
180251 AGGAGAGGAA CCTAGCGCAG TCCCACAAAT ATTCGTTCAA GAAAGACAGC
180301 TACATTTGAA GGCCCCTGCT CTGGCAGGGT GACATATTCT GGCTATTAAC
180351 TGTGCCAGCC ACAGTCTGAG GTTCATTGTC CCTCTTTGTC TGGAGCAATC
180401 TTGACACACC ATCCTAAAGC TAAAGTCATA TGTTTCTCCA CTGGTGGAGC
180451 AGTAGAACAC ATTTGTGAAG AAGACAGATT TTATAGTTGG ACCACAGTTT
180501 GAATTCTTGC TTGCTGTGTG ATCTCAGGGA AATTTCCAAA GGTCTCTTAA
180551 CCATAGCTCC TTAACAGAAA ATTAGGATGG ATACTCACTC ACTCATTTAT
180601 GCAAATAAGT ATTGGGTGTC TACTGTGCAC ATTTACCTCT TGGAATTGTT
180651 TAAGTAATTA AAGGATTATG TATATAAAGC ATTTAACAGA ATGCCTGACT
180701 CAGGAATAGA GCTTGGAAAA TGTTTAAAAT ACATCTCAAA CAATTATTAT
180751 TCTTTTGTTT TTAAATTACA GTAACCTCAA AACTCTTAAA AAGCTGTTTG
180801 AATAAAGTTA TATAATGCAT ACAAAGGGGC ATTTTTAGCC ATTATTGTCA
180851 TTTTTGTTCT TATAAGCAAT GCTTCTGAAG CCGTTTTCAG TGGAGCACTT
180901 AACAGCACCA GTGTGCTTTA ATTTCAGGCC AGGAGATAAA AAATTAAGCA
180951 GGGCTCTCTT AAAAGACCAT AACAAAGCTT CAACAAATGC AACAACTTCT
181001 CTCCCCTGTC TTGCCACTGC TACTCTGTCC CCCACTTTCC AGTGACTAAT
```

FIGURE 3, page 51 of 122

```
181051 GGATGATATC TAAGATACAT TAGAGCTATC TGAGGATCGA TTTTTATTTT
181101 TTAATAGTAT TAAAAATACA ATATATTCAC ATGATAAAAC AGATATTACA
181151 GAAGGGTATA AAGTAAAAGA TAAATGCCCA TTCTTTCCAA TTCTATACTT
181201 CATAGAAGTA ACTATTTTAA ACCCTTTTCC TGCATTTGGT TATTTAATGG
181251 TTTCCTTTAC ACTTCTACAT CATATATTTA TGTTTCTTTT TCTTGCTTTA
181301 TCAACTTTAA CTCCATATCT GACTTCCCAT TAGAAAGATG ACAAATCAGC
181351 TCATATTACA CCCCCAACAT CCCCTTCTCA ATGTTTGTTA GCCTATATGC
181401 TATTTATTTGG AATTCTTCTG ATGATTACCT TGTATTTTTT ACATAGTGAA
181451 CCTTGATTTT TGATTCACCA GCATTAGAGC TTTGTCAAAA TACAGATATC
181501 CAGTTTCCTC TTTAGGGCTA CTGAATGATA ATCCTTGGGG ATGGTTATTT
181551 TGCAAAAGTG CCTCAAGGTA TTCTGATACG TCCCTCAGAA CCACTTTCTG
181601 AGAGCTTACA GTTTATTGGT CAATTTCTTT GCATTTAATA ATGACAGTAG
181651 ACACAGCATT CTTTCTCACC GATTTATTAG TCACACATGG GGCAATGTGA
181701 AATGCTACAT AGGTGCAGAA GAAGCAGACA AGAACACAGT GACCTAATAG
181751 CCCTAGGAAC TCACTCATCA CCAAGCTTCA CTTTAGGTGA GAAACAGTCA
181801 CTCAAAGAGA AGCATCTGGT ACCAGTGCTG GGAGGTCAGT GGAAGGAGAG
181851 TGGGTTTAGA CCTGCATTCT TGTGCTGAAT AGCTGGAAAA ACACTTGACT
181901 AACCTGAAAA ACAAGTACTC TGTAGATTAA TTTCATTTTT TTTTTGTCAG
181951 TAGTAACAGT ATATAGAGCA ATGGTCCCAG CATTTGGGAA CATGTTGTAA
182001 ATAGGCAAAG TGGCTCAAAG AGAGTAGTAA TCAAACTTCG TAGTTAAAAT
182051 TTTTAATAGA ATATATTAG CAATGTAGTA TTTTTATATA ATACTATATA
182101 ATTAATAGCA CAAATAAAGC ACATAAAGAA AAATGTTCTA ATTACCAAAT
182151 ATTACCCTCT AAGGTTTTTT TTAATAAAAT GGCAAAGAAA ATTAGAAAAT
182201 TATTTAATTA AACCTTATTT AATGAGAGTT CCCAGGGGAA CAGAATGAGT
182251 GAATTGAATT TTCCCATAAA CCAGTGGGCA AAGAGTTAAC ACCTTTATTT
182301 CCCCCTTCTT AGTCAAGAAC ACAGTTGTGC AGGTTCATTT TCTTGAATTA
182351 TGGAGAAATT TAGTCTAGTA ACTATAATAG AGTCATTTCT TAGTGATTAA
182401 AAGCATTGTA GAGATGCAAG ATTATTATTC CCAGCATGAA ATCTGAAATA
182451 GGAGGGAAGA TGTCAGCTAT TAGATGAGAA TATAGTTCAT GACCACAAGT
182501 TATTTCCTAA TTTTGTTTCT TTTACTTAAC ATCATAGCTA TGAGCTTGTT
182551 TTATCATTCT CTGTCCATTT TTTCTTAGGA GGGGATGGGG GTTCAGTTGG
182601 GGAGTCTTAT TAGTTTGATC ATAAGTAATT AAGGTTTGGC TGCACTAACC
182651 TTGTTGTCAG ACATTCTGGT GACAAGATTG AGTGGCATTT ATGTTGAGCA
182701 GTTGAGGAAA CTCGGCCATT TCCTTTGGCC TCCATTATGT CTGAGATGGA
182751 AGCAGTCAGT ATGAAATGCC CAGGACCTTG TTACAGATTT TCAAGAGACA
182801 GAATTTGACT GCAGGAGATA CTTTCCATTT CAATCTCCCA GTAGTTACTT
182851 TATGAACATG TTCTTTTTAA AGTCTCTAAG AACTATGAGA AATCTTTCAA
182901 CTGTGCTCTA GCTTTTAACC AGTGCTGGGG TAAGTGCTCT CTTAGATGGT
182951 ATAACGTCTT GGAATGCATA TTGGGTACAG GAACCTAGTT CTGATTTCAC
183001 CTTTACTAAT GGCTTGCTAG AACCATTGTG CAAATCAGCT ACATCTGTGA
183051 AACTGTAAAC TGTGGCTGTG GAACACGTTA AACTCAAAAG GTATTTCAA
183101 CCTGAATTTC TCTTTTCAAC CAATTACAAT CACCCACTGG TATTTGCTGC
183151 CTGCTGGTCA TATTTCTCCT GGATAATTGG CTTTCTTTCT TGAGGGAAGT
183201 CTCTGGCTTT TATTTGTTCA CTCAACAAAT ATATACTGTG CACCTACTCT
183251 GTGCCAAGCA TTGCTCTAGG AGCAGGTTCT AGGACACATC AGTGACCAAG
183301 ACAAAAAAGG TTCCTGCTCT TAGGAAACTG ACATTTCAAT AGGAGGAAAG
183351 AGGCTATGGG AACACATGAG TAAACAAGAT AATCTCAAAT GGTGATAAAA
183401 ACTCTGGAGA AGCTCTAACA GGGCACTGAG ATAGAGCAGA CTGGATAGGG
183451 TGCTGGGGGT AACTCTACTA TGTTCTTCCA GAAGCAGTTC CCTGAAACAA
183501 GGATTCAAGT ACAAGGGGCT TCTTGGGTGC CAATCCTAAA AAACCAGGGA
183551 AGGGAGGCAG AGAAGGGAAG TCTGCCTACA AAGTTTCATA AACAAGATGC
183601 CTACACTGCA GGCTACTGAA GGAGAACAGT CCCTGAGGGG ATCCCAACAT
183651 GTCAGTGTAG AACTCACCTC AGGGTCATGC CATGCAGGGG AGAGGATTCT
183701 GGGGCACTTA TCTACTGACT CTTCATCTGT CATTGATTGA AAGCTGCTTC
183751 TGGGCATATT AACTCCTTAA CATGTCTAAC TTAGCCTGCA GGTAGGCGGA
183801 GTAGCCAGGT GTTTGCAGTT GGTACGTAAA GTAGAATACC CATGTAGAAA
183851 GGGGAGTGGA AGCGAACAGG ATGCTGAGAT TGTCTACAAC AGGGCAAGAA
183901 CTAGTTCTTT AGATAAGAAG TCAGGAAACA CCTCTCTGAG AGATGGCAGT
183951 CTAGCTGAGA TCCAAAAAAT GGAAAGGAGC CAGACAGGGA AATCACATTT
184001 CCAGGCAGAG AGAATATCAA GGACAAAAGC TCTGAGTGTG ACTAAGCTTG
184051 CTTTGTTTAT AAAAATAGAA ACAATAAAAA ATCGCAGAAC TTTAGAGGCA
184101 TAGGGGTGGG GGAGGGTTGT TTTTGAATCA TAAAGTCTAT TCTTTTAGAT
184151 AGAAAAATCA GAGAAAGCCA ATGAGAAATT CAGAAACATA GACGGTATCC
184201 TAGGATCCCA AGAGGGAGCT GGGACCGCTG CTCTAATTCC TTGGCTCCCA
184251 GTTCAGAACT TCTCCATCGA CCATGGATCC CCTGCTCATT TTCCCATTTC
184301 ATTCATTGGA ATTTGGTGGT TTCCCCCAAG CCATGGAGCT GAAAGGGAAT
184351 TGCCTGTATG ATCCCACTCA AATTCCTTGG GCAGTTTTCC AAGATACGAT
184401 CAATGGCATA TGAGTGGAAG ATCTGCATGT GACTTCTGAA AAAAGTTCTT
184451 CATGAAGAAG TTGTGCATTC CATTTTTTTT CTTCCTGCTG GGCAGGCCCC
184501 CAATTATACC TAAAAGAAAC CCAAGTTAAC ACAAGGCTCT ATGTGACCAG
184551 CTTTGGGCTG CCAATTTGAC CTCCTTTCCC ACCCTTTCTC TTCAAACTCA
```

```
184601 CTGTGCCACA ATCACACCAG CCTCCTTACT GTTTCTTGAA TATGCCAATC
184651 ATCCTCTCAC CTCTGGGCCT TTGCTCAGAA TGCTCTTCTC CAAATATCCC
184701 CATAGCTCAG ACACAGGCAT CACTTCACTC AGGTCCCTAA GCCAAGACCA
184751 CCTCCTTGCG GAGGCTCATC CTCATCACTC CTTCCAAAGC ATGACACTGC
184801 CCCTCCCCAT CCTCTTACCT CACTTTATCC TTCATGGGGC TCATTGCTAC
184851 CGCAGAGTAT ACTATCCCAG ATTATACTAT ACTATGCTGC ATATTTACTT
184901 GTTCATTTAT TGTCTGTCTT CCCCACTAGA ATATAAGCTC CATAAGGGAA
184951 GAAACTTGCT TTATTCACTA TTAGAATAGT GCACTATGAC TTTTCAAAAA
185001 TGTTTGTTGA AATGATTAAT CAGTGAATAA GTGAGTGAGT GACTGAGTGA
185051 ACCAATGCCT AACAGAGGCC CTTAGTTCTG GTGCTCTCTC TGTTACTAAC
185101 TCCCTAAATG ACGCCTCTGC AAGTTGATTC TTCTACTCTG CCTCAGTTTC
185151 TTTATCTGGC AAATAGACAT ATAATGTTTA CCTTAAAAAA GGATAAACTG
185201 AAATGAGGCC ATAGATATGA AAGTACTGCA CATTATTGAA TATATTATAC
185251 AAATGTAAGA TTTCCTTTTA CAGTCGAAGC CTTCTTGAGT TTTAGTAAAC
185301 TTCACCAAAT GGGGTGGAAA GTGTCATTAT AATAAACAAT CCTTCATGGT
185351 TGCTGGAATT GATCAGGCCT CATGGAGTGG TGAAAATTTA CCCTGTTGTA
185401 TGGAAAGAG CACAGGGTGA GGATGGAGAC TGGGATCAGA ACTCGGCCTC
185451 TTCCACAGAC TTGCTGGTGT CCTTGGGTAA CTCATAGGAG CTTGCCCAGT
185501 GAAATTCAGA TTCCTCTTCT CTCAAAATGG TTGGGTATTG GGATGGTAGA
185551 CGAGATTATT CCCTCCTTAG AGGTTTCTAC CTTGTACTAT ATATCTGCAT
185601 CATCATAATA ATCACAGCCA CTATTTATTG ATCACTTGGT CTGCCCCATG
185651 CACTTGACAT GTGTCATTGC ATTGTATGTT TACCCCAACA ACCAGACCTC
185701 CATTATTCAG ACAAGAAAAC TGTCAAGTAA CTTAGTTAAT AGTGGTATAA
185751 CTACTGGCTT ATGCATAGCA GCGCCAGCAC TCCAAACTAG GCATACTGGC
185801 TCCTGAGCTG TGCTAATTTT GTGCACAAAC TAAGTAATAA TCAAGTTCAA
185851 AGGAAAGGAG GCCTAACTGT CTCTCCATTG AGTAGGTTTC ATCTGGTGGA
185901 ACTGAATGGA AAATCCTGTG GTTTTGGAAC AGGTTAAGTT GATTTATCCA
185951 GGCAGCATGT TCTAACTTCT CCCTCCTCCC CCTCTCACAG GGCTTCATGG
186001 ACATTGACTT AAACAAATTC AAGGAGAGTG GCGCCAATGT GACAGGTTTC
186051 CAGCTGGTGA ACTACACAGA CACTATTCCG GCCAAGATCA TGCAGCAGTG
186101 GAAGAATAGT GATGCTCGAG ACCACACACG GGTGGACTGG AAGAGACCCA
186151 AGGTGAGTGG ATGGGCAGCC AGCAGCAAAG GGCCAGCCTG GTCCCTTTGC
186201 CTGCCCCAGA TTTCTGAGCT GCATTAGTCT TTACAAAGGA ATCAGTTTTC
186251 TAAAGCAAAC AAATTCAGGG AAATATATTT GTAAAGATTA TTAGGTACAA
186301 GGTGCAGGGG TCAGACAACC CAAAATGACA TGGTTTTAAG GAGGGAGACA
186351 TTTTATTTAT CTCTCCTGTG AACAAAACTT AGGAGTCAGC AGTCCCAGAC
186401 TTGTAAAATG GCTCCACAGT TATCAAATAC CCAGGCTTCT TGTACCTTCT
186451 TGCTCTGCTA TCATCCACAT ACGGCTGCTG CCTAATAGTA CAAGAGGGCT
186501 GCTTAAACTA CAGCCATTGC CTCAGCATTC TACCCAGTAG GAAGAAAAAA
186551 AAACATGCAA TGCACAACTT CTTCATGAAG AACTGTTTTC AGAAGTCACA
186601 AGCAGATCTT CCATTCATAT GCTATTGATC GTATCTTGGA AAACTACCCC
186651 CAGTTGGCTG CAAGGGAAGC TGGAAAATGG TGGTTCTATT CTGGGCAGAG
186701 CCACCATGTT GCCCAGCTCA GGAGGATGCT CATTTCATTG TAGATTGAGC
186751 TTCTTTGTGT AGTGAGGTGG CCCTTATTCT GCTCAGCCAT GTGCCCAGCT
186801 AAAAATCAGG GCAACCTAAC TAAGGAATAT CCAGCAGATC TCTACCTGGG
186851 AGAGTCCACT CTCAGTAATC AGGCAGACTC TCTGCTTCTC ACTTCCCAGC
186901 AACACAGCTC TAAATACTGC CACCAAAATC TATTTTGTTT GTTATTTGAG
186951 AATGCTTGGG AATAAGGATA GCGAATGATT CTTTTTCTGA AGTCAAACCA
187001 GATAGCTTGA CAGTGGCCAT ATGGAACCCT GTGTTGAGAA GGATACTAAG
187051 GCCAAGTTTG TTTATCTGGA CAAACAGTGA ATCTTTGACA GACTTTCTCT
187101 TGCCACTCAA TCCATTTCTT TTTATAAATG GCAAACCGTA TAACGGAGAT
187151 ACTTCTTATC CCACTATTCA AACTGATTTA ACTCTTCAAT AATGAAGACT
187201 TATTTCAATA TGATCTTAAG CAAACAAAAT CGCAAATATG CTTTCAAGCA
187251 ATGAGAAAAC TACATAGGAA TTAATTAAGT AATGTGCAAT GATTGCACTC
187301 CAATTTCCAA AAGACTGAGC AGATGACAAA AATAACCAAA TGTAATTTAA
187351 TTTTTTTTTT TTTTTTGAGA TGGAGTCTGG CTCTGTTGCC CAGGCTGGAG
187401 TGCAGTGGCA TGATCTCGGC TCACTGCAAG CTCCACCTCC CGAGTTCACG
187451 CCATTCTCCT GCCTCAGCCT CCCAAGTAGC TGGGACTACA GGCACCCGCC
187501 ACCACGTCTG GCTAATTTTT TGTATTTTTT AGTAGAGATG GGGTTTCACC
187551 GTGTTAGCCA GGATGGTCTT GATCTCCTGA CCTTGTGATC CACCCATCTC
187601 AGCCTCCCAA AGTGCTGGGA TTACAGGCGT GAGCCACTGC GCCCGGCATG
187651 TAATTTAACT TTTTAAAAAA GAAGTGAGAG AATTAAATTT AAAAAATTAG
187701 AAAAATACCC ATTCATTCGT TCTTCAATTC TCTATTGTGA ACTTGGAGTG
187751 TGCTAGGCAA CATAATAAGT ATTAGGAACA AATTAGTGAA GAAAACAGAC
187801 ATAGGTTCCA AAGCCAGGAT ATATTTTCCT GGACTGCTCT CCTGATTTTG
187851 TTTCATCCAC ATCCTAGTCC CCTTTTTGTC AGGAGAGGGT ATAATTGATA
187901 GTTGTTGTGA GAAAGAATGA GGGGAAAGTT TACAGGATAT AAACTTACCA
187951 CTTAGGTAAG CCATATGTGG AAAAAATTAG GAGCTCACCC TTCTTTCATT
188001 TTCTTTTTGC TTTTACTTTT ACAAGAGATG AAAGAGTTAA TCGTTCCTCT
188051 TGGTTTCCAG CTGATGACTG TAATGCCGGG ATAAACCAGC TGATTTTTCA
188101 TGAACTGTAT CCAGCCTGCA GATGTGTTAT ATGTAATCTA TGCATTTTTT
```

```
188151  CCCAAATGAA  CCAACATTTT  AAAAATTGCA  AGATTGCACA  CAGAAACCTA
188201  GAATCCTGGC  TTCTCTTCAA  AAATTATAAC  TGGCAGTACT  GAACTCACAG
188251  TTCAAGGAGG  TCAGCATTGA  CTAGCATGGT  CAAGCAGCAG  CACCCATCTG
188301  CTTGAATATT  TATGCTTCTC  AGGGACACCA  TCCCTGATTC  ACCACTGTCT
188351  GCCCCACGTA  TACCATGCAT  CTGGCCCACT  GCACACCCTT  CTCATCACCA
188401  GAAAACACAT  TCCCAAATAC  AGCACCCAAA  CCTGCCTTCC  TGTCAGCTCT
188451  CTTTGATACC  TAACTGTCTC  CATTCCTCCC  ACTAGTACAC  CTCTGCGCTC
188501  ACCTACGATG  GGGTGAAGGT  GATGGCTGAG  GCTTTCCAGA  GCCTGCGGAG
188551  GCAGAGAATT  GATATATCTC  GCCGGGGGAA  TGCTGGGGAT  TGTCTGGCTA
188601  ACCCAGCTGT  TCCCTGGGGC  CAAGGGATCG  ACATCCAGAG  AGCTCTGCAG
188651  CAGGTAAGAC  CACCAATGTT  TGCCCCATCT  CATAGGAGCC  TACTGGGGGA
188701  TTTCAGCATC  AAATTCCAAT  AAAACACAGC  TATTCTAAAG  AAAAGGAAGA
188751  AAATGCCTGA  AGTTCAGAAC  AACCACTGCA  TTGTTGGTGT  TGGTGGTTCT
188801  TAGCATACAT  TGAAGCTCAT  ATAAAAAAAA  AATGATATGG  AACAGTCATT
188851  TCTTGTAGTG  TAAAAGCTGT  ATTTTCTCCT  TAGCAATTTT  GCTGAAAAAG
188901  GAGAGCTGGT  GATTTTCTGT  GTATGGGAAA  GGGACTTGAA  ATACACAAGG
188951  ATGAAACTGA  ACCATGTTAA  TGGTCTCCTG  GAAACACTCC  CCTCTTGCCC
189001  TGATTTTCTG  GATTTCTTCC  TTTGCTCTCT  GCACACATTG  TATGAGAGCC
189051  TGGGGTATGT  GGACCCTAAA  AATGTTTCTC  AGTACTTCTG  ATACTACCTT
189101  CTTGCTTCTC  AGCATTTCAT  TCATCAATTA  TGTTTGCACT  TAAGAATAGT
189151  TAAAGGGCAG  GGATAGAAAA  TGGCCACGCC  AACTCCAATC  AATTGGCTAT
189201  ACAAAAGCTT  CTGAGGCTGA  ATCCAGATAC  AACAGAGAGA  AGCATAAATA
189251  TTCAATTAGT  GATATGTCTG  CTGTGGAAGC  AGCATGAGAC  AGTGGTACAT
189301  GTGGGTGTAT  ATTTAACATG  CCTGGTTTAG  AAGATTTTGG  GGACTTGCCC
189351  TCAGCTTTAT  TGCTCTTGGG  GCTCCTGTAG  ATCTCTAAAG  CACCTCAAGC
189401  CCAGGCTATG  ATTCTCAAAC  TGCCAAGGAA  TAGCACTATA  TTTTTGTTCT
189451  GATGCCTCCT  GCTAGAGAAG  CTGTATTTCC  GAAGGGACAG  GGAGAGGATG
189501  GCCGTGCTTG  CTGCAAAGGA  ATAACAAAGC  ATTGGCCACA  ATGACAAACC
189551  AGCACAGCAA  GATTATTTGG  CACAAATGTC  CCTCAGGACC  CACCCTCCCC
189601  AACAAATGGA  GTTGCCTGCC  TAAGACCAGC  TTTACTTTTA  AGACGACATT
189651  CAGCAGAAGA  TGAATTTGGG  CTCCTTGGGG  AGAAGAGGAG  CATTTCTGAA
189701  TGAGAGAGAA  ATGTACAGCA  AAATGTACAA  CTATTCCCAC  TTGTTTGCCA
189751  ACCACACGTG  CACAGCTCTA  GCAACTTTCA  CAACCAGGAG  AAAGAGATGC
189801  TGAAGGAACC  TCACCAGCTG  TTCCTCAGCC  CTGATGAGTG  CCTTTCTGTA
189851  GAGAAGAATA  TGTAGGTCTG  TCCTTTGAAA  TGAAGCTAAG  CAGGATTTCT
189901  ACTAGCTACA  TGAGGAACAT  GCTAAGGAGG  ACCTCCAGCT  GCCATTTCTG
189951  CCCTCCCCTG  GTCCCTGTGC  AGGGTGGCTC  CCAAGTCACT  AGGCAGCAAC
190001  AACAGACACC  AGGCAGCTTG  CAGGGGAAAA  TTGCCAAATG  GACAGTGCCT
190051  GCGCCTCCCT  TTCTACCCCC  ACCCCAGCTT  ATTTAAAATG  CTCTTCCAGA
190101  CTCCACAGTC  GAGACAGATT  CTGTTTGCAA  TGTGAGGCTG  GTTTCAAAAG
190151  GTCCCAGAGA  TTTGTCCTCA  GCTTCACAAC  CCTTCCAACT  CCCTTGCCTC
190201  TCCCATCTTA  ATGACGTCCT  GAAAGGATAG  TCTGATGCCA  CCATGACAGT
190251  GATGAAGCCT  GGGAGGCAGT  TCAGGGTGGC  AGGAAGGACT  CTGTACTGGG
190301  AGGCAGGAGA  GCTGGACTCC  ACGTCCAGCT  GGGCCCCTGG  CTCTCTGGAT
190351  GACCTTGAAA  CATTCACTTA  GCTCTCCTGC  TGCCTTCCCT  TTCCTTCCCC
190401  ATGAAAATGA  AGGGGGTGGA  GAGAGGACCT  CAAGTCTCAA  CTGGCTCTGA
190451  AAATTCAAAC  AGTCTAATTT  TTTTTCTTAT  GGTCTAACCC  ATGTCCTTCT
190501  GGTTGTAGTG  TATACTTAGC  ACACTGCTTC  TGCCCTCAGT  AGGGTTTGAA
190551  AGGAAGCAGT  TTCCATAGTC  AAAAGAACAA  TGACCTCTTT  TATTTTGTCT
190601  TGGAGCCAAG  ATATGTGTGT  GCCTGCCCTT  CATCAGCTGT  TCTTTGAGGA
190651  TCTATGGTGT  GCCCTGGCTT  GGAGCCAAGC  ACTGAGGACA  ATAAAAGAAA
190701  GCAAGGCCTG  CGCTCAAGGA  ACTCCTGGCA  GTGTCTATGG  AGAAAAAGAG
190751  AGGAACAACT  ATCCCAAATA  AATAAATAAA  TAAACAAACA  AACAAACAAA
190801  CCAGAACATT  CTGACCTTAA  GATCAGAGGT  TCAAATCGAT  TCATTTTCCA
190851  ATCTTTGTTA  AGCACCTAGA  ATGAAAAGA   TTTTGTTGAA  AGACACCTTA
190901  GAGATTACTG  ACTCTTCTTT  TCCCTCACTT  TATAATGAAA  CAGCAAATCC
190951  AGAGTGGGCA  GTGACTCACC  CAGGGTCACA  CAGCAGCTTA  GTGGCGGAGG
191001  CTGGACCAGA  TCCCAGTCCA  GGGCTCCTCT  TCCCCCAGTT  AGGTCTGTGC
191051  TATGGGCCCA  GGGGCCCTTG  CTTATAAGCA  TTGACCTCTG  GAGCCTTCCA
191101  TCCATAGTCA  GGACTACTCT  TCAGCAATGG  CTTTTTCTAG  ACCCATCTCT
191151  TGAAATAGCC  ATGCCACCAG  GGAGCTGGGT  AAATCCTGAT  GGTATCCAGT
191201  CTTAGAAACC  TGAGGCTTGG  AGGCTCAGGT  CTCTACTGCC  TTCACCTCTG
191251  GCCTTCAGGT  CACATAGTGG  GAGAGAACCT  GTGGTTTAGC  TTGTGTTAGA
191301  CCTGGGTTGT  CTATAAGTTA  GGCCAAGAGG  TCCAGCACAG  CCTACCTGGA
191351  GGGCAAGCAT  GCTAGGGAGT  TAAATTCTGA  AAATAATATG  TATGGTGTGT
191401  TAAAGGCTTA  GTATACACAA  AGCTCTAAAC  ATTTACACAT  ATTATATCAT
191451  TGGATCTTTG  ATATAACACC  TTGAGGTAGG  TAGTTTTATT  AACCGTGGTT
191501  TGTAAATGGA  GAAGCCGAGC  TTCAGACAGG  TTATAAAACT  TCCCAAAGTT
191551  ATACAGCTAG  CTAGTGGTAA  AGTTGGGACT  CCAAACCACA  TTTAGATGAT
191601  GCCTCCCTCT  GTATGCTTCA  CTGCTCTGAA  ACCTCAAGGG  CACGGCCAAA
191651  CAGGGAAGAC  ACAAGAGCTA  TGGCCCAGCC  CCCAGCAGCA  CATGGCCTTG
```

```
191701 GGTAATATCT GTGCACCCCC TCCCCCTTCA CTCCGCTGTA ATTTCCCTAG
191751 CAGCAGAATG AAGATAATCA GCTGCCTGCC TGCCCCCTGC TTGCCATCTA
191801 GGGAGTCATT CAGAATATTA ATGAACCCAC ATCCTGGAGG CCCTCAGCAC
191851 TCCAGGAAGG ATGCTCATAT GTCGCCTTCT GGACGGTGGA GAAGACTCAA
191901 CTCCCCAAGT CGGGTTCTTA ACATAGGGGA GGTAATAGGC ATTTGAGAAT
191951 ATGATTTTTT AAAAGAAATC TGTAGATTCT TTTGCTTAGA AAAATGCATA
192001 TGTGTACATA CATAATTTCT GCATGACCAG GAGTAGAGAG AACATACATA
192051 CTCCTAGAAT CCATCCCAGG GCCTCAAATT TAGAATACCT CCCCTAAATA
192101 GTAATCATCC CTCTTGGTCT TTGTTTTTGC AACCTGCCAG CCAACAATCA
192151 AGCATATGGA AGTGAAGGTA TGCTCAGAAC TTTGCTAGAT GGGGTCTGGG
192201 GTTGGGTGGG CAATGGAGTT TAAGACGCAG TCCTGCCTTT AAGGGCTAAC
192251 ACAGGTGGGC TTATGGTGCT GTGGATGATC AGAGCAGAAT GCCATCACTG
192301 AGGAATGCAG ACATCAGCAA GGCTTTCTGT AGGAATGTGA CTGGCCTTTC
192351 AATAGGATGA CCACTTTATT ATCCAAAATC TATCATCCAA ACGGGAACAC
192401 TTAGGAGTGA AAGGAAAAAC TACTATCAAT TATTCCAGAA CAAGAGTACC
192451 AGAACTCTCC TGCGTTAGTC CATGTGCATT GTTATAAAGA AATACCTGAA
192501 ACTGGATAAT GTATAAAGAA AAAGGTTTCA TTTTAGCTAA TAGTTTTGTA
192551 GGCTGCACAC GAAGTACACT GCCAGCATCT ATTTTTGGTG AGGGCCTCAG
192601 GAAGCTTCCA ATCATGGCAG AGTGTAAAGG AAGAGACAGT ATGTCACGTA
192651 GTAAGAGAAG GAGCGTGATA GATAAGGGAG GAAGTGACAG GCTCTTTTAC
192701 ACAACCAGCT CTCATGAGAA CTGAGTAAGA ACTTATTCAT TACCATGGGG
192751 AGGGCGCCAA GCCATTCAGG AAAGTTCCGC CCCCATGATG CAAAAACCTC
192801 CCACCAGGCA CCACCTCCAA CGTCCAGGGT CATATTTTAA CATGAGACTT
192851 GGAAGGGACA AATATCCAAA CTATATCACG TCCCAGGCAA ACTGAGATGG
192901 GTGGTAATGG AACCGTTAAA TGTATGGTAA ATTTGAACAT GGAGTAAATT
192951 GGGTTTTGGA GGTTCTGGAT GGGGATGTCA ATGATACCCA GCAAGAGACG
193001 AGGTAGGGTG AGGGTACAAG AAAGGACTTG CACATGTCAC ATTGGCCTGT
193051 TAAGGAATTA GGGATAGAAG AGCTGGGTTC CAACCGTGGC TCCACGCAGA
193101 ACTATCTGGG GGATCTTGGA CTAATTGCTT GCCTTTTCCA GATCTGGATT
193151 TTTCCTGTCT GCTAAACAGA CATAATCCTC CTAGTGCTGC CTCCCTGACT
193201 GGCTTGTCAC AGGGCTCAGA ATTTTAAGAA AGCATCGTGC TTGTGGGCCA
193251 AGCATCGTGG TTCATACCTG TAATCCCAGC ACTTTGGGAG GCTGAGGTGG
193301 GCAGATCACG AGGTAAGGAG TTTGAGACCA ACCTGGCCAA CATAGTGAAA
193351 CCCTGTCTCT ACTAAAAATA CAAAAAGTTA GCGGGATGTG TAGCAGGCAC
193401 CTGTAATTCC AGCTACCTGG GAGGCTGAGA CAGGAGAATC ACTTGAACGC
193451 AGGAGGCAGA GGTTACAGTG AGCCGAGGTT GTGCCACTGC ATACCACACC
193501 AGCCTGGGTG ACAGTGTGAG ACTATGTCAA AAAAAAAAAA AAAGCATCAT
193551 GCATGTGTTT CTTTGAACTT CAGGGAAGCT GCATGAGACA GTCAGAGCCA
193601 AGATTATTCT TCCCATGACT CAGGTAGGAA AGTGAAGCTT AGGAGGGTTC
193651 TGAGATTTGC TCTGGCCAGA GTACCTAGAA TGTGACCCAG CAAGGACCTA
193701 GTCTACAGGC CTCACAGCCA GTGAGCATCC AGGAGGAAGG ATCCACCTGA
193751 GGGCAACTGC AAGGGGGATA CAGGAGCCCT GCGTCCAGTT TGACTGCTCG
193801 GCTGTCTCCT TCAGGACTGC CTTTCAGGAT CCAATGAGGG CAGGGGAGAG
193851 CAGTCACTGT TGACACCTGA CAAAGATTCT TTGCTTGACC AAACTTTAGT
193901 CAGGCTTCTG AACCTTCTCC TAGGCCCATC TGTGCAATTC TTGTGAAATC
193951 CAGTTTTGGC AAAGAACTTG CTAAGTCGGT TTAGCAAGAA CCCTGTCCAC
194001 CACGTCCACC CTCTTTGCCA TGATCATCTT CTTCAGCCCC CACCATCCCC
194051 CAGATTATGT CGGATCATCC TCGTCCATCT TCAGCAAGAA TCCTCTTAGG
194101 CCATTTTAGC CAGAATTCCT CTTAACCCCG ATGCTTGCTG TTAGCAATTT
194151 CCTATCCACT GACCCCCACC CTGCTCCTTG GCTATATATT CCCACGGGCC
194201 CATGCTCTAT TCAGAGTTGA GCCCAATCTC TCTCCAACTC TGCAAGACCC
194251 ATTGCAGGGG TCTCTATACC TATTGCTACG ATTCTGAATA AAGTCTTCTT
194301 CACTGTGCTT TAACAAGTGT GCTGATTAAT TTTTTCTTTA ACACAGCTGA
194351 AGTAATAGAG ACATTAACCC GCATTCTCTC AGCACCAAGC AGGAAAGGAA
194401 ATATATGCTT CAGCCTCCCA TCAGCAGCAG ACTCTGAGCT GGCACCCAGT
194451 ACCCTTTACA GGAAGCCCAA GGTTAATTCT CCATCTTTCA TGGAGGGAGT
194501 TGAGGGCGCC AGGATGGCGA CAGAAGTTCC GGGAGCAGGA ACCAAGAAGA
194551 AGTGCCTGGG CTCCATCAAT CTGACCTCAG ACACCCTGGG ATGGGGGGAG
194601 AGAGGGATAA GTGCCCAGAT CCCAGAGCTC AGACCTGATG GATGGGGACA
194651 GTGGTTTCAA GATACACATT TCTGAGAAGC TTCTTCCTCT GTCTCTGAGT
194701 CCTGACTCTC CTTGATAAAT GGTTTGGGGC TGAGCCATTC TCTTGAACTC
194751 TCCTTGCTCT GCCATCATGG AATGGTGTTT CTGGGATGTC TCTTTCGCAT
194801 TCTCTGATAC TTTGTTTTAT CTCAGTGCAA GTAAGACTTG GCTTCCCCAA
194851 CTAGATACTA AGAGCCTTCA GTTACCCTTG ACCTCTCAAT GACTTACTGT
194901 GAATCCTGGA GTCAAGCGCC ATCAGCTCTG AGTCTCAATA ATCTCATCTG
194951 TGAAACAGGC AAAATAACGT CTGCTCTGGC TACTCACTGG GTTTCTGTGA
195001 ACATGAAATA AGCAGCTTCT TGTGAGATCA CCGTGACAGT GCAAGGGGTC
195051 CTTGGGTCAC TAGAACTGTG CAGGTAGGAC CCTTGACCTT ATTGGAAACT
195101 GAGGAAGGCA GTAAAAGTGT CAGTGACATG ATCCTTCTTT CTTCTGAAAG
195151 AGTCCCCTTG TCTTAGACAA CCTACCAGCC CCAAGGCCTC AATTTTAGAT
195201 TTTATTTTTC ATAACTTTTA CCCACTCTAC ACAGCACAGT AGTAGTAGTC
```

FIGURE 3, page 55 of 122

```
195251 GTCATTATCA TCATTATTAT CATCTAAATA ATATAAACTA TGCATTGAAA
195301 ACTTATGTCC CAGACAATGT GCTAAGTACT TCTTGGAGGA GGAAACTAAG
195351 AAGCAGATAG TTTGAGCAAG GAACCTATGG TCATACAGTT AGAATGAGCA
195401 GAGCACAACC TGGGAAATGC CCAGCAGCAA TAGCAGAAAG CAGGTAGAAA
195451 ACACTACATT GCACATTTTT GTGTTGTCCT CCTGAAGCCT AGCACAATAG
195550 CACTGGCCTG TGTTTCGGCG AACACTTGGT ACCTTAAGTG AAGATACCAG
195551 AAGTTACCAG AAGCTCCAGA TTTTAGACCT GCCTCTGCCA CTGGTTAGTC
195601 ATAAGACTTG AGCAGATCAC TTTACTTCCC AGAATTTGGC ATCTCCCATG
195651 TAAATAAAGA TCATAATCTC TAAATGGCAT ACTTCAGGGG GTTCCTGTGA
195701 CTAGAGATGA AATAATATGT GTGCAAGTGT GTCATAAACA TGAAGTTTTT
195751 AGAAAGTAAT ATTAGTATTA AGTATCACCA TTAACAACAA TAATAATAAC
195801 AGCTGGCATT TTTTGAATAC TCATCATGCA CCAAGCATTG ATCAAAAAAT
195851 ATCTCTTTTA ATCCTTAGAA CAACCTTAAG ACATAGTTAA CTCTAATTGG
195901 TTCCATTAAA CAAATGAGAA ACTTAGTCAT AGAGAGATTA TGTACTCTGC
195951 CATACTAATA TGCCATGCTG ATTATTAGTA TGAAAATTGA GACTGGGGCT
196001 GAAAAGTAGA TGCCTGTTTG GATAATTAAT GACACTTTCA GTTTGGGCAA
196051 ATCAGTCTAC CAGTCTACCA TCTGCACATC TATCCAAGTC TGTTTCTTTG
196101 GAATGAGTCA CTTACATGGT ACCCACCAAA CTAACACTAT CTTGAACTGG
196151 AAATAAGGGA ACACTAAAGA TTGGCAAGAG ATTACTGAGG TGATAAGAAG
196201 GTGAAGCTGC TGATGGACTG GAATTGCTCC TTTCTTTTAT TCTTTGTAGT
196251 AGAATCTGTA CTTTGTTTTC TCTCTGAAAA GCAAAGATAG CCCAGACATT
196301 TATGGAGCTG GGGATTTCTC CTGATTTCAT CTAAGAAAGT AAAGAGCATG
196351 TTGTAAAATT TGCTCAGTGC TCTGGGCCTG TTGTGACCTC CTCACTGAGA
196401 CTTCAAACCA GAAGGTGACA AGAGGGTCAA CCTCGAAACA GGAACACACA
196451 CACATGCACA CACACACGCA TTCTCTCTCT CACTCTCAAA CACACACAAC
196501 CCCCAACTCT TCTTATACGT TCTAACAACA GAGGAGCTAG CCACTGTCAG
196551 AAAAAAATAT AAAACTCTGC AAAGCTTCCT TTTAAGCCAT TTGAAGGAGG
196601 GAAATAAACA GTGCTGGGTC ACAGGGTTGG ATTTGTATTT GTAACAAGTA
196651 GACACCTCAC CTCACTGGCC TTAGGCAAGA GGGATCTGAG GACACATGGT
196701 GGATCACTAT TAGGGAATGT GGTTGCTTGT ACCTGAGCTG ATGATACACA
196751 GCTAGACTCA GACTCAGTTT GAGAGTGGTC TTGGATGACA TTTATCAGTC
196801 ACCTACGAG CAGCAAGCTC AACCTTAAAT ATCTTGGATC TCCATGGTCA
196851 CCATTTGACT TTTGATATGA ATTTGAAGAT AGAAGGCCAT GAAAGTTTGA
196901 TTTTGCCCAT TTGTGGAGAA GTCTCACGCG GCATATTTGA GGGTTCCAAT
196951 ACAATTTTAT TTTAGCCAAC TGAGATTTCT TTAACACCTT GCATTCTCTT
197001 ATCTGAACAC AATGGGTTCT CCCTAGGTGC TTTGAAGTTT TCACACCACT
197051 TTCACATTAG CAGTTATCAT TTAAGATAAA AAAAGGGCAG AGATTTTTGG
197101 AAACTGAAGG CTTAGAGAGC TAAATTGCCT GAGGGCACTT GGCTATTAAG
197151 GATTAAGCTG GGGTTAAATC CAAGTCTTTC AATTGCCAAG TATTTTATTC
197201 CCTGGACTCA GGAATAAAGA AGAAATTCTT AAAGGAATTA AGAAGCCATC
197251 TCCAAGCATA GCTTAAGGCT TCATTCATAA AGCTGGCTTC TTGTCCTGGG
197301 TCTTCTGACT CATTAGTGAT GGTGCACCAT TTTCTTTCCT TTGCAGGCCC
197351 CCCATACTTT CTTCATCTTC AGATGTGTAT CTGAGAAGGG CAGTGGTCAT
197401 AGTGGTTGTG TGATGGGAGG TGTTTGGTTA GGGATGGTGC AGACATTTCA
197451 CATTAGTATG CACTCTGACC CATTGTTAGT ATTTGCCTAA AGAAATAGGT
197501 AAAAACAATT GTCAGGATGA ATCCCAATTT AGGGAAAAGA GATCTGTAAT
197551 GCATCCCTTG CCTGTGGCAA GGGAGTGAAG AGTTTTAGCA TTCAGGATAC
197601 TCCAAGACAT CATTCCATGG AACACTCTTG GGTTCTGAAT TTCTACTTCA
197651 GTGGAAAAAG CAAACACACA TAAAGTACAT CTGAGTTCAC TGCCCACCAC
197701 TTGGTTTTGT TTTCCAGGTG CGATTTGAAG GTTTAACAGG AAACGTGCAG
197751 TTTAATGAGA AAGGACGCCG GACCAACTAC ACGCTCCACG TGATTGAAAT
197801 GAAACATGAC GGCATCCGAA AGGTAAGGTC CCCCTTTACT TCTGTTCTGC
197851 AGAGAGAAGA GGCTGAGCAG GGACTCTGGC CAGAGCTGAG GGCCTGTGAG
197901 TCCACCTTTT CTGGACTGGA TCTTTGAAGA AACTCAGACA ACACAGATTC
197951 TAGACTTGGC TCTGCCACTA ACCAGCTGGG ACATTGGGCA AGTCTCGTTC
198001 TTCCTCTGAG AATCCATTCA TTCATTTGCA AAATTAAGTT TAAAAAAATC
198051 TCTACATTTG TCCCAGGATG CTTGTGAAAA TCCAAGGTAG AGGAAAGCAC
198101 TTCTAAAACA TAAAGTAATT GATGTGTATA AAATGCCACT CCCATTCCTG
198151 AGGGTTTCTA AACTAAGAAC TTGAGAATGA TGATTATTGA TGAGGTTAAC
198201 TATCTCTTCC TAATCGATAG TTGGTCATAT CCACTCTATT ATTTATACAA
198251 AAGTAAGGGT GAAAATATAT ATGTTTACAT ATATGTATAA TGTATAATAT
198301 GTTTGCATAT GAAAATTCTT AGAATAGCAT TCAAATCCTT GGAATAACAT
198351 TTCGAATTCT ACCAGAACCT ATGTGCCCGG GCCTCTGCCG ATTTCTTCAC
198401 CCTTAACCCT TGATACTTCC TTCATCTCTC CACTCCAGTC ATTCTGTTTG
198451 TCTTTCACCT CCCTGAATAC ACCATGTTCT TTCTCATCAT TGAGCCTTCA
198501 TACATGTTTC CTCTGCCTGG GACTTCCTCC CCCCATCTCC CTCCTCTTGC
198551 CTGCCAATCC CTCCTCAGCC TTCCACACTC AAAGTAAATG TCATTCCCCA
198601 GCGAAGCCTT CTCTGGCCTT TCTTATTATG CTTCATGGAA GCCTCTACTT
198651 CTCTGCTCAT GGCCTTCATC ACATTGCTAA TTCCATTTGG TGGCGTAGCA
198701 TAATGACTGG GAGGCATTGT ACAGCATGGC GTAGAGCTGG TAGGGTGCCA
198751 TGGATCAGAA TGCTGGCTCT GGAATCCTCA ACACTGAATC CTGGCTTCAC
```

FIGURE 3, page 56 of 122

```
198801  CACTTACTAG  TCTGGGGTTC  CGGATAATTT  ATTTGAGCTC  TTTGTTCCTT
198851  AATTCTCTTA  TCTAGTAAGT  GGGGATCACC  TTAACCATGC  CAACCTCATA
198901  GGGTCATTGA  GAGGATTAAA  TGATCTAAGA  GTGTGCAGAA  GTTCTAAGTA
198951  CTGGAACTGG  CCCATTGAAA  GTTGGGTCTT  AATCTCTCAG  ACTTAATGCT
199001  CTCTATGCCT  GTGCTGTCAG  ATAACCTTGC  CACTAGCCGT  ATGTGGCTGT
199051  TTAGGTTGAA  TTTTAAATAA  ATTCCCATTT  AAAAATCAGT  TCTTCAGTTG
199101  CACTATCTAC  ATGTCAAGTG  CTCAGTAGCC  ACATGTGGCT  AGTGGCTACC
199151  ACATCAGGCA  GCACAGATGT  AGAACATTTA  CATCACTGCA  GAAAGTTCTA
199201  CTTTAAAGTT  CTCTTTGTCC  ACTCTCCGTC  CTCACCTCCC  TTAAACCTGT
199251  CTTCTCTGCT  CTTATGTCTA  GAACCGCATC  TTCTACCTCA  CAGCCAATCT
199301  TATCTCATTC  ATTAAGGCTA  TGTCAGTTGT  CTATTGCTGC  TGTACAAATT
199351  ACCACAAACA  GTGACTTAAA  ACAACACAGA  TTTATCATCT  CACAATTCTG
199401  TAGGTCAGAA  GTCTGACTTG  AGTTTCACTG  GACTAAAATC  AAAGTGTTGG
199451  CAAGGTCATG  TTTCTTCCTG  GAGGCTCCAG  AGTTAAGTTT  GTTTCTTTGC
199501  CTTTTCCAGT  TTCTTAAAGG  CCACCTATAT  TCCTTGGCTC  CCATGTTACC
199551  AAGCTTTCTC  CATATTCAAA  ACCAGCAATG  TTACCTCTCT  CTGACCCTTC
199601  TTCTATCATC  ACATCTTCTC  GCTAACCACA  GCCTTCCAGA  GCCCATCTCC
199651  CATCTCTGAC  TGGGAGATCT  CCTCCTTCAG  GAATCAGCTA  CAGTAACCTG
199701  CCTTGACTTA  CAGCAGGTAC  CAAATAAGGG  CACCCTATTT  GGCTATGAAT
199751  GTAGCCACTG  GGAACGTATC  CACTTCTTCA  GCAAACTTTT  GGCATGTTGA
199801  TTGTACACAG  ACACTCTTTC  TGGGCTCAAA  AACCCTTGAG  AATGACATTT
199851  ATCCAGAAAT  AGTCCAAGTC  TGAGTTCATT  TTTGTTGTCC  CATGGTCTTC
199901  TGATTTTTGC  TGCTGGAGAA  GACATTTGCT  AGGTCACTTA  GCTCTTATAA
199951  CTTTCAATTT  CCACATCTGT  AAAACGGGCA  CAGATCATGT  CTGCATTAGC
200001  GCCTGATCAC  TGTTCAGTGA  ATGTTACCTG  TGTTAGTGGT  TATTAATAGC
200051  TATAGTAAAT  GTTGAAGAGT  TAGCACACGG  CTGAAATCTG  GAAAACACTG
200101  AGGTGGCTTG  TTTATTTCTT  TCAAAGCATT  TAGCAGCTAC  TGTTAAGAGT
200151  ACTGCCTCTG  GAAGGGACAC  CAAATATGTG  ACCATCTCCC  CAAGGCCATC
200201  TTCCTTTCAG  ATTCTTTTTT  TGTTTTTTTG  GAGACAGAGC  CTTGCTCTGT
200251  CGCTCAGACT  GGAGTGCAAT  GGCATGGTCT  CGGCTCACTG  CAACCTCCAC
200301  CTCCCGGATT  CAAGTGATTC  TCCTGCCTCA  GCCTCCCGAG  TGGTTGGGAT
200351  TATAGGTGCC  CATCACCACA  CCTGGCTAAT  TTTTGTATTT  TGGGTAGACA
200401  CGGGGTTTCT  CACGACGTTG  GCCAGACTAG  TCTCAAACTC  CTGACCGTGT
200451  GATCCATTCA  CCTCCGCCTC  CCAAAGTGCT  GAGATTACAG  GTATGAGCCA
200501  CCACCCCCAG  GCTTTTTTTT  CTTTCTTTCT  TTCTTTTTTG  AGGCAGGGTC
200551  TCGCTCTCTT  GCCCAGGCTG  GAGTGCAGTG  GTACTATCAT  AGCTCACTAT
200601  AACCTCAAAC  TCCTGGGCTC  AAGTGATCCA  CCCACCTCGG  CCTCCCAAAG
200651  TGCTGGGATT  ACAAGCATGA  GCCACTGTCC  CCAGCCCCTT  TCTTTCAGAT
200701  TCTGAGAACT  GCTGGTATCA  CCTCCTGCCT  TGACAATGAA  AACATAGATG
200751  CAGCATTTTT  GTGTAAGGCC  CAAGCAGGCA  AGCCTATTGC  TCCTAGATAG
200801  AAAATTGTTG  ACCATAGACC  TGGGCTTTTC  CTCAGAATCC  TCAGAATGGC
200851  CTTTTGCTCT  CAGGGAAAAA  AGAATATTGC  TATTTCCTGG  ATAGAACAAA
200901  TTGGCATTTC  TACATTGTAT  ATGAGTAGTT  ATGTGTTTGC  CATAATTAAA
200951  ATATGGATGT  CGAACTGTTT  TCCCCAACTC  TGGAGTAGTG  GATTAGCTTA
201001  AAATATAGCC  AGATTATTTT  CTACACGTTA  GTGGTCACTG  GGTATATTGG
201051  GGATATACTG  AAGGTGCAAC  AAGTAAGAAT  AGAAGCCAGA  GACTTCTATG
201101  CCATTCTGC   CATCATCCAG  CTGTGTGGCC  TTCAGCATGT  CTCATAGTCT
201151  CTCTGGGTCT  CTAAAATAAG  TGAGAGACAT  TGGGCTGTGC  AAACCTTAAT
201201  TCCTCTCAGC  TCTGACACCT  TGGATGTCAG  TGCCATCTGC  TGCATTTTTA
201251  CCATCCTCTC  CCTACTCACA  TTGTTCCTCT  CCTGGCTGGA  CTTCGGCTTC
201301  CTCTGTGAAA  GTAGAATTTC  CACTGGGGCC  TTCATCAATT  GACAAACTGT
201351  CCTTTGGTAT  GAAATTCCCC  AGTTGTTACT  CCCAGAACCA  GAGGCCCCAG
201401  CCCTTTGAGT  TGACCCTAAC  TATTGCCCAG  AGACTGTTGG  GAGGCTTTTT
201451  ATCTCTTCAA  GACTTGCTCT  TCATCAAGAA  CTTCTCAGAA  GTGGAGGCAC
201501  TGTAGCAAGA  TTAATGGTTC  TCAAGCCTCA  GCAAATAGAA  GAATTACTGG
201551  GAGGCCTTAT  TTAAAACGCA  GATTCCTGGG  TCCCAGCCCC  TGGGTACTCT
201601  GCTTCTGGAG  AACAGAGATG  AAGCCTAGGA  ATCTGCACCT  TCTTGAATCC
201651  TCCTCTCCAA  CCCACAGATT  TTCTGGTTGG  TGCGTAAAGA  GTTTGATAAG
201701  AATCACTGGC  AACTACTAAG  GAAAGAAGAT  GGAAGTAAAA  GGAATACAAA
201751  TAATATAATA  TAATATAATA  TAATTTATAA  TATAATTTAC  AAAAAAAGAA
201801  ACACTGACAG  GGTGGCTAAG  AGCTTGGGCT  TTAGAGGCAG  ACAGACCAGG
201851  ATTTTAAGTC  TGCTTTAGTC  TTTACTAGGC  ACATGACCTT  GAACACATTA
201901  TTTAGCCTCC  CTGCAAGTCA  TTACATCATC  TCTAAAAGGG  TGGTAATACT
201951  CTTTGCCTCC  CAGGATCACT  GTCAGGATTG  AATAAGACAA  TGCCTGTTAC
202001  ACCACTGCTT  GTAGTAAGGG  ATTCGGAAAA  GTAGCTCCTG  GCACGTAGCG
202051  GACATTCAGC  CCACATTTGT  TTACTTGTTT  GTACTTTTAA  ACTCCCTTCT
202101  ATAGGCCACA  GGGATTTTAT  ATCAGCATTG  CATTTGGGGG  AGTCAGGCTG
202151  TGTAAGCCTG  TGGAATGGAT  AAATCAGCAA  AGAGAAATAA  CAGAGTACCT
202201  TAAAATCCAT  GAGCAAATGG  TTGTGCTTTA  GTTTTCAGAT  CCCAGGGCTG
202251  TTTTTAAACT  TACCTTCCAA  TGGCCAAATC  CTTTCTTAGA  ATGTGGGCTT
202301  AAACGTCCTT  TGTTTATGGG  GGATTTGCCT  TTCAGAAAAT  CAATTCCTCA
```

FIGURE 3, page 57 of 122

```
202351 CATCTGTGGC TTCAGGCTTT TTACTCAATC AGCCTCCTAA CAAAGTAATT
202401 TTTCTGATTT TCAAGGGTGA CCTAGTTGTA CTGGTTTCAG TGAGCATTAC
202451 ATGGCCTTAC CTGATTGTGT ATAGTAAAAA GGAGCTGTTT CTTCCAGATT
202501 TGGAGCCTCA GAGAAACTCT CCTGATCTTC AGGCCTATTT CCTGTTCACC
202551 CATGTGCCAA TATACCCTCT AGGTACCTGG ATACAATTTG ACATCCCACT
202601 GAAATGTGGG TGTTCTAAGC ATCCATTCAT CATAAAGTTT AGGGGCTTCA
202651 GATACCAGGA TGGGTACTTG CTCTACTAAA ATGGGATCCT TAGGAAATCC
202701 CGTTCAAGGA TACCACTTCA CTATGGGGTA CTGATTTAGG GTCTCTCTCT
202751 GAATAAAATA TCTTGTCAAA ATCTGGTAGA ATCACAAATT CTGATAAATG
202801 GCTGCCCAAT GGAGAAGTTT AGGGAAAATT ATCTTACATT TTTCATCGAA
202851 GAACTGGTAT TGTTGATTTA ACCGTCTTTT CCCATCACCA TTGTTCCTAT
202901 AGCAATTTTT AGACTGGGTG GAGGAATCTA CTTCTCATTT CAATTCGATT
202951 TGAGTGGCCC TGCCCTGCCC CAAGTTTATT ATCCCCACTT CTGACCCTGT
203001 GTATAACTAG AATGAAAAGA CTGGGCAGGA AACAAGACTA AAGGGACACA
203051 AAGTCCTGCT GATATCAAAA GTAATCTTCT AAAGTCCCAA AGAATTTATA
203101 GCTTGCCATT CCATATGCTT TTTGGAAGTT TTGCTTTAAA TCCTTGTTAC
203151 CCAATTTTGA CCATACTGAA TCATGTTATA GCATCAGATA TAGACATAGC
203201 ATCTCAGATA TAGCCTAAAC CTCACCACCT CTCTCCATTT CTACTGCTGA
203251 GCCCAGAGCC CAGGCCATCT TCCCACACAC ACACAGTAGC CTCCTTACCA
203301 GTCACGAGTC CTGCTATGTT CTTGCCCCTC TACAAGGCTA CTTTTCCACC
203351 ACAAGACGAG GACAATAATT TTCAAATATA TATCAGGTTA TATGGCTCCT
203401 TTCCTTAAAA CTTTTACCAC TTTCCTGTTG CCAGTAAATA TACAACATGG
203451 CCCTCAGAGC CCTCAATGCT GCTTCCCTGT GGCATCAGCT CTCACTCCTC
203501 TTTCTCTAGC TCATTTCTCT GCAGTTACAC TGGCATCTTT GCATTCCTTG
203551 AGCACAGCCT CGCACTTTCC TCAAGTCACT TGCATATGCT ATTCCTTTAC
203601 CTGGCATTTT CTATCACTAG AGTTTCATGT GCTGTGTGCC TCCTTGTCAT
203651 TCAGGTCTCA GTCCAAGTGA AGCCACCTTG GAAACGACAT CCTTGACCAA
203701 GCACTTTTAA AGTCACTCCC ACTCACCCAG CTCACAGTCA CAATTTCCTT
203751 TTTATTTGTA CTTTTCATGG TGCTTATTCC TTCTCGATATA TTTTTATTGG
203801 TTGATTGATC TAGATTGAGG TTGGCAAACT TCTGCCTACT GGCCAAATTC
203851 ATCCCACCAC CTATTTTTGT ACAGCCCATG AGCTAATGGT TACATGTACA
203901 TTTTTAAATG GTTGTAATAA ATCAAAAGAA GACCATTTTG TGACATGTGA
203951 AAATTATGAG AGATTAAAAT TTCAGTGCCC ATAAAGTTTT TCTGGAACAT
204001 AGCTATGCTC ATTTGTTTAT ATATTATCTA TATCTGCCTC TGCATGACAA
204051 CAACAGAGAT AAGTAGTGGC AACACAGACT ATATGATCCA CAAAGCCAAA
204101 GATATCTACC GTCTGGCCCT TTAGGATAAA GCTTGTCAAC CCCTGGTCTG
204151 GATATGTATT TTCTTCATAC TTCTCTACCT CCTAAATGTT CTAAAACACC
204201 AACTCTTTAA AAGCAAGGAC CATATTTGTA TTTTTATTAT ATTCACAGTG
204251 CCTAGAATAT ACTGAAACAG AGTAAGCACA TACATATAAA AGGTTGTTTA
204301 TTACATCACT GGGAAGTTTA TCAAATGTTT CTGTGCAATC AGAGAGCACA
204351 CTATGCTAGC CCATATTTCA AAAGATCTGC CAATAAGTAA GGGAAAAAAA
204401 TGCCTGCAAA TTTAATAAAA TAACACCTCA AGCAGAACTC AGATAAAGTT
204451 ACACATAAAC TTATTAACTT CAAATCTTTT AAGTGTGTTA ATTTAGATAA
204501 TCCTAGGTGC TGTAACAGAT AAACTCTGAA ATCTCAGCTG TTTAATGCAA
204551 AAGAAGCTTT TTTTTGTTCA CTCAGTGACC ACTTTTTTGG CTGAGGGTTC
204601 TGGCTAAGAC TCAGGCTCAT GGACCCTCCA CTGTCTACTT GGGTCTTTCT
204651 GGATTTCAAC ATCCAGCTAA CAGATAGGAA TGAAAGAAAA TGGCAACTCT
204701 GCTGGAGATT TTTGGGGCAT CAGCCTAGAA GAGATGCACA TCACTTCTGT
204751 TGTATTCCGT TGGCCAGAAC CCAGTTACTT GGCTCAATCA GAGGTAAAAC
204801 AAGCTGGGAA ATGTCATTGC TGGCCAGGTA GCCACTCTCC ACCAACATCT
204851 CTACACCATG GAAGGAAAAT AAGAATGCTT GGGAGTCAGC TAATTATCTT
204901 GGCCACAATA GACAACTTAG TCTTTAAAAA TTGATACTAA AGGATCTTAT
204951 TTTTTGAGGT AAGGGGCTGT GGTCTCAGAG GCAGCCTGGA GATACCAATT
205001 TCTGAATTTG ATTTGATGAC TGTGCAATAT AGATCAATTG AATTTTCAGT
205051 TCTATGATCA TCTCCTTTTA AGACTTTCTC CACTTAAAAA ATCTGATCTG
205101 TCATCTAGAT TCATTTTCTA CATTCAAAGA ATCTTTAGAG GTAGATGGAA
205151 AACACGGAGA TCAAAAATTA TAACTGGCCC CAGGAGAAGA CCTCTCACTG
205201 TCAGAATTGT TTAAATCCTC TCCTGACTGG TAGGCCCCAA TCTTTACCAA
205251 CTACTAACTC TGATTTACTT TTAGAAAGAA TCAAAATTCC TGCATATCCT
205301 CAGTAGAGAA TCAAAGTGCT GTATTATAAT CCAACCATTT CCCAAAGAAA
205351 GGAAAATTTG CTCTAATCTC CAAAGTGCAA TGTCTGTTCA AAAATCTTTG
205401 CCAGCTTTCT TTTCATCAAA CTGTGGAACC AGATTTCTCA GTCTACTAGT
205451 TTACATGAGG CATAGGCATG AGGCTGAGTA TCACTCAGCC CACTGACCCT
205501 GGCAATATTT TGTTTTATCT CCCTACAAAA GAGTTAGAAA TAAAATGAGT
205551 TTGTTTACAA TTTCTAACTA TTCTACTAGC TTTTGATATG AAAGTACCTA
205601 GCATATAAGC CAAGCTATAC CACATTTTTT TAGAGATCCC AATTTAACAA
205651 TAGTGCTAAA ATTAATAAGT AGTGCTAGCT TTGAAGGACA ACTATCCTTA
205701 AAAATTAAGG TGTCTTTCTA AGCCATATAC ATCTGGCTTA CACAGATTCA
205751 TCTTGCTTTT TTTTCCTATC TTGTATGAAA ACCTTGGGAT TTTACGGCAG
205801 TTTTATAATT TTTAAACCAC ATACCCTGAA CATTCTATAC ATAAAGAAGG
205851 GTTATATTGT CAAGTGAATT TCAAAATGCT CTATAATGCA TGCTTCTTTT
```

FIGURE 3, page 58 of 122

```
205901 GCAGATAATG TTCAACAGCA AATTGAAAAC AGAAATGTCT TGTAGTATAG
205951 AAACCTGTTA ACCTTCAACT AGGCACTACC CTAATGAATA TCATTTTTTA
206001 GCTTACTGAC AATATGAACC ATACACTGTG CTAATTGTTT TACATGCATT
206051 AACTAATGTA GTTCTCATAG CAGCCCATGA GGCAGGTACC ATTGTTACAT
206101 CCACTCTACA GATCAGGGAC TGAGGACCAC AGAGGTCAGG TAACTTGCTC
206151 AAGCTGATAG TTGGTAATTA GGAAAGCCTA GCTTTTAAAC CAGGTCTGGC
206201 CTGAGGCCAG AGACCAAGAT CTTGACCACT GGGCTCCCTC TTTTTTAAAA
206251 TAATACATCT TAATACTCAG TGGCTTTTAG AGGAATTGGT TGCATGTCAA
206301 AGGAAGCAAC TTCCTTTCTA CTGATGGTTG TGCAGTTTGA GTAGGAATAT
206351 TTAAACCTGT GGACTAATTG TGAAGAAGGA AGAAGAAAGA CAGGAAGGAA
206401 AGGAGGAAGA ATAGGAGGAA GGAAGGGAGA AAGGATGGAT GACAGGGAAG
206451 AAAATGAACA AGAAGGAGGA GAAAGGGAAA AGAAAAAAAA ACCTTAGGAC
206501 CATCTATGAG GGGATAAATC ATATTTGACA GATATTTTCC CAGGTTTGTA
206551 TTGATTTTAT TAAATAATCT TACCTTTGAG GTCCACAAGA CCTGGGTTCT
206601 ATGTTCTGCC ACTAATCTAC TATATAACCT ATTGTTTTGT TAGATCATTT
206651 AATCTCCCTA AGCCTAAGTT TTCCTATCTG TAAAGCAGAG AAAATAATCC
206701 TAAGCCTGCC TGCACTATCT GCATAGTGTA AAGATGTTAT AAAAGTACTG
206751 TGGAGATTTA AAAAACAAAA CAATACCAAA GGAGAAAACT TTACATCATA
206801 ATATACTACC AGAGTGCTTT TAAACATCTA TTTTTCAGCT AGAAGGCTCC
206851 TTGAGAAAGG CAACTCTTGC GGGGAATCCC AATAGGTGAA ATAGATAAAA
206901 AGCAGAGCTG ACCATTAGAG CAAGGATGAG GAAGCCAGAG CTCTCTCCTC
206951 TTCACTGCCC CTCACCACCT TCCATGAGCG GTGAAAGGCC CCACAAGTCT
207001 CTTAGGGTTC CCTAGAACAC AGTCCTTGCA AAAGCGAGGG AACTGAGACC
207051 ACACTGTCTT GAGCAAATTC TGTGGTCTCT GCGCCTCTGC TTCTCCCTGT
207101 GAAAAAGGAA AAAGTTGGAC AAAATGATTC TTCAGTCCCC TTCCAGTTCT
207151 GACATTCTAG AAACGTGAGT TTCTGGTTCT TCTGTCATTA GAAAGCAATG
207201 TCTCCTTCCA CCTTGACTAA CAGCATCCCT CACAGGGAAC ATGGTACACA
207251 TGCCTGCACT GAGGGTAAGC CTCCATGCAG TATCCTGAGA GACATGCTCC
207301 CCGTCAGACC TCCGAGCTGT CTCAGCATCG ATAGGGTGCA CCATGTCCAT
207351 GCTGGGTCAC TGCTGCCTGG ATGCATTCAT TCTGTCCACA AACATTTCCT
207401 GAGCTGCTTC TCTGGGAAAA GATGTTCTAG ACTAAGACAG GAACTCTGGA
207451 ACAAGTATGT TTATTTCAGT CTTGTCCATG AGAAACTCAT AGCACCATGG
207501 AGAGATGGGG ACAGACACAC AAACAGCTAG ACCCAGTGTT CTAATGGGAA
207551 CGTACACAAG GTACTCAGGG TTGTGTCTGG CATGCAGGGG GCACGGCCCT
207601 GGAGTTGGTC TCCCTGGCTC ATATCCTGGC TCCACGGCTA CCCTGTGGCC
207651 TTGGGAAAGT TACTTCACTT TCCACGTCTC GCTTTCTGCA TACTTAAAAT
207701 TGAAAGGATA ATTAACTACC CACTTCGCAG GTTTTGTGAG GATGAAAGGA
207751 GTTAAAACAT AAAAAGCACT TTAAAAAGTC CCTGAAATGC AAGCATTCAG
207801 TAAATGATAA CTAATATGAT TTCAAGTCCA GAGCCCAATC CCTTCTTAGG
207851 AAGAACAGCA TAGTGGCTAA ATGCAGCCTC TGGAGAGAGA TTGTCAGGGT
207901 TCCAGGACAA GCTCAACCAC TTTGCAGCTA CTTCACCTCG GGCAAGTTAA
207951 CACACTCCCA CAGGCCAGAC GAAATGGCAT GAAAACTGTT GAACACTTAG
208001 CCTCTGACAT AGCAAGAGCA TCATTAGTGC TGGCAATTAT TGTTGTTAAT
208051 GGCTGCGAGA TTACAGGAAA AACTATTTCC AACTGAAGGA ACTGGGAAAG
208101 ACATGAAGGT GAAGGTGACA TTTCAGCTGA CCATTTGGCA AATGCCTCAG
208151 TTTTTGTGAG CCTATGCTGA GTTCTGGCTG TTGATAGACC TGTTCATCCC
208201 AATGCATATG CACTTCTAGN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208251 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208301 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208351 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208401 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208451 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208501 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208551 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
208601 NNNNNNNNNN NNNNNNNNNN NNNCTACTG CCCTTTTGGG CTAACTCTAT
208651 CTTCCACCCA GGACCCACAG AACTTAAACA TCTGGGCAGA TTCCTGTCTT
208701 CATATCTTGG CTCATATTCT CCCTAACCTG AAAGGTTTTG GTCCAGACCA
208751 TTCATCTCTC ATGATCATAA GCCCTGATTC CTCCTGTTGC ATTTTTCCCT
208801 GTGTAAGATC CCACACTTGG CTTTTGCTTC TCTGAACTCC TTAGGCCCAC
208851 TCACTTGTCA CTTCTGCGGC CATGTCATGT CTTCCCATGG TAGACCAGAG
208901 GCGTTCTCAG AGCAAGCCCT ATCTCTCAGA CTTCTTTGCA TCTCGTCAAC
208951 CCTGCCTGAC AACAAGCAAC ACTAATGTTT TAGCTCAGAG CCTTGTGCAC
209001 AATAGCAGTT CAATTAATAT TTCTTGAAAG ACCTTGGAAA ATGAATTAGT
209051 ATAAATAACC TACTCAAATT TGAAAAATTA ATATTGTCAA CCATAATTTT
209101 TAGGCACTCC TATATATTCA ATATTGTAAT AGTTTATACT TGGAGACAGA
209151 AGAAATTTTT AAAAATAAAG GATAAACAAC CATCATAGGA AGTTAAATCT
209201 AGATGGAAAA ATACAGTTAA CCTAAAAATA AAGTAAAAGA ATGTAATGTT
209251 TAAATCATAT GATTCCAACT ATAGTTCAGA ATGAGTTCAC TGAAGTGCAG
209301 GGTTAGTAGA CATGGGGGAA AGAGGGGTTT GACCCTGTGA ACAACTGCAG
209351 GGAATTAAAT CCCATGGTCC TGGCTTGCAT TGTACAAAAC AGACTGGCTG
209401 TGTAAACAGT TAAGCCCTTA TCCCTCAGAG GTGGCAATTT CCAAACTGAA
```

```
209451 CCAATTATTG TGGGGATTTT CCCTGGGAGC AAAAATTGGGG GCACCTGAAA
209501 AGCACTGTGC TTCTTATTAT TTCTGTTTAC CAATATTTTA GAGCTCGGTA
209551 TGTCCAATTC TTCATGAGCT CCTTACTTGC CTGTCTCTGG TATTGACTGG
209601 GTGACCCAGA GCAGGCCAGT TCAGAGGAGG CTGGCCCACC TGACACCTCC
209651 ACTCTCTTCT CATTAACAGA TTGGTTACTG GAATGAAGAT GATAAGTTTG
209701 TCCCTGCAGC CACCGATGCC CAAGCTGGGG GCGATAATTC AAGTGTTCAG
209751 AACAGAACAT ACATCGTCAC AACAATCCTA GTGAGTACTC AGTCCTTCAT
209801 CAAGGTTACT TGGGATTCAA GCTAGGCCAG CACAAGGGTT TTCCACCAGG
209851 ACTGAAAGCT GGCCTTTCTT CTTGCCAAAA CTGTGTAATA GATAAAAGCA
209901 GCAGTCGAA AAGGGAATGC CCTGAAAATG AGAGGCTCTG AGTTTTCACT
209951 CTGTATCTCT TAGTTTCACT GTCTCATCCT TTGTACCCTT GGGTAACTTA
210001 CTTACTTTCT CTTGAGCCAG CTTTCCCATA TTTAAAACAT AAGAATGACA
210051 CTAAATTGTG CTGGTTTTCA TCTGTCCTCC CTCAGTAGAA GCTATTTTCA
210101 AAGAAAGTCC AATACATAAA GTAGCTGTAA GTGAAGATGC TGTAATTTTC
210151 AGTGACTGAT CATGAGAAAC CTGGAGCCTG TTTAGGGTCT ATTTCTCCTT
210201 CAAGATGACC CCAGAGGTAT TTCCAAAAAA ATACAAAATA TCCTGGAACA
210251 TAATTTGAAA AGCTGTATGC CATATCTCAG TGATAAAACA TTCTTATTTT
210301 AACAAAGTTT GCTTCCTTAA CACAAGAAGC TTGTAATGGG GTAGGGAGTG
210351 AAGACATTTA GGAAGTGAAT TGAGGGGCTA GAGAGCCTTC CCCAGTGTTA
210401 ACCAAACATG ATATTATGCT ATGCCAAAGT CCTCCCTACC CATGGGTGAA
210451 CCCATAACCC ACATTCTGCT ATCTCCCCAT TTCTCTTCCA GGAAGATCCT
210501 TATGTGATGC TCAAGAAGAA CGCCAATCAG TTTGAGGGCA ATGACCGTTA
210551 CGAGGGCTAC TGTGTAGAGC TGGCGGCAGA GATTGCCAAG CACGTGGGCT
210601 ACTCCTACCG TCTGGAGATT GTCAGTGATG GAAAATACGG AGCCCGAGAC
210651 CCTGACACGA AGGCCTGGAA TGGCATGGTG GGAGAGCTGG TCTATGGAGT
210701 AAGTTCACTG CAGGGTGGGA AATTAGAGGG CGGAGGCAGA GGGTTTGACA
210751 GGAAATCATT TGGTGGTTGG GTGGCCCTGC CCACAGATGT CTATGAAACC
210801 CTGTAATTGA GTGTTGTTGC TGCTGAACAG ATGAGTCATC CAAAATCCAA
210851 TTTCTTCAGA CACTCTTTGT TCAGGTTACT GGTCCCAGGT CCCTCAATCC
210901 CACTCAGAGT CTTGTGACGT CAGTTGATTG TCGTCCAACA CAGGTGACAG
210951 CATAGCTCCA AGATCAATTT TCTTGAGGCA GACTGCTGAG TTGTCTATAC
211001 AAAGTCACTT GTGGCTCTCT CAGTATCAGT TTCTTCTCTG ATATTAAATG
211051 CATCTGGAGC CAACCTAACT TTCTAGTTAC TTGCCTCTCT AGTTTCATGC
211101 TCTCTCATGA AATTTCCAAT TCAGTCAAAT GCCCCTTAAT TACTCTGTTC
211151 CCTAGAGTGC TCCCTTCCAC TCTCCACCCC TAAGATACTA CTCCTTCAAA
211201 ACCTATATCA AATAATACTT TTTTCAGGGT GTGTTTCTTT CTTTCTTCTC
211251 ATAATAGGTA TGAATGTGCC TTTTAATTGT TCTCGCCTTC CCCTATAGAA
211301 TTTAGTTGCT GGTTTTTTTT AATGGTTTAC CCTGCCTTAT ATAACGGTTA
211351 CCTGTGTAAC AGGGGTAGGA CTATTCTATC TTTATAGTGC TCACCACACT
211401 TGAAATAACT CCATGCACAA TTGCTATAAA ATCTTCAATA AATTACAGCA
211451 GTTTTGAAAA GCTGCTGAAT GTCCCACATT GTTTTAAGCA TTTGGGGAAT
211501 TATTGAGAAG CAAAAGATTT GATCTTTTGC TTAATACTTT ATGAGGTAGA
211551 AAAGACCCCA TCTTTTAACA TTTTATGGGG TAGAAAAGAC AATGTGGAAA
211601 AATAGTAAAA GGTAGTATAG AATAAGGAGT CTATATTGTA TGGCTCAGCT
211651 AAGGGCTAAC TAGAGTTTGT CTAGCCCTCA GTGGGGATGT GAAACTTGAA
211701 AAATGACCAT ATTTAAACAG ACCGAGAGGC CGGGCACAGT GGCTCACGCC
211751 TATAATCCCA GCACCTTGGG AGGCCGAGGC AGGTGGATCA CCTGAGGTCA
211801 GGAATTTGAG ACTAGCCTGG CCAACATGGT GAAACCCCAT CTCTACCAAA
211851 AATACAAAAA TTAGCTGCAC ATGGTGGCGG GCACCTGTAA TCCCAGCTCC
211901 TTGGGAGGCT GAGGCAGGAG AATCACTTGA ACCAAGGAGA TAGAGGTTGC
211951 AGTGAGCCAA GACCATGCCA TCGCACTCCA GCCTGGGAGA CAAGAGCGAA
212001 ACTCTGTCTC AAAAATGATA ATAAAAAACA TATGAGAGAA AAGCAGCCCA
212051 GGAATTTTTA AAGTATAAAC AATAGGATGG TGGTGGAAAT AAGTAAGGTG
212101 TGAGAGGAGA ATGAGAAAC GCATGGTTTT TGTTGAGGAC TTGGGTTGAA
212151 GAGTAGTCAG GGATACATAT GAGTAAAAAA TAGCAAGAGG AAGAGTGTGG
212201 ATGATTCAGT GGGCATTGGG AGATCACGAA GGTATTTGAG TAGAGAGACA
212251 ACAAAAGGCA ATGGAAGAAG CCTCCAGCTG CCTTGTGCAG GGAAGGGACC
212301 ACCACGGCTT CACTCATAGA AACTAAAACA CATGCCAAGC CCCAGGTCAA
212351 TGTTAAGTGC TCATAAGGAC AAGCAGCCAC TGAGGAAGAT GATAAATCTT
212401 GTTTCATATC AGGGCAAGAG GAGCCATGAT GGCCCTGAGA GACATACAAA
212451 GGGAATTCAA AGAAGAAAAA GATGGAATAA AGGAAATCTT CCTCAGGGAG
212501 GTAGCTTTTG AGATGACATG TGAAGGTGGT TATTGAGTTG GGGAATGGGA
212551 TGTGCTTCTC TCCTTTCTTA TTCCCTTTAC CACCTCTCAC TTTGGGAAGC
212601 TCCATGGACA AAAGGTAGAG ACCTGGATAG TACATGCTGC ATCTGGAGGC
212651 TGGTTTCCAT GGGAACTCCC ATCAAGCTCT TAAGGTCATC CCCATGGCAA
212701 CTGCTGTGCA CTTTTCACCT TCTCTAGCAT TTATCTTCAC CTTCACCTCA
212751 TGTAATGTGG TTTGCTTGGT TAAAAGTCTG CAGTGTGGGC AGAACAATGC
212801 CAGGATCATC CCCAGTAGCC AACACAGCTG GTGGTGAGTC ACTGGCACAG
212851 CAGGGCTCAG GCCAGCTGGA GTTACCTATG GGTGCCTCAG CAGCCAGGCC
212901 TGCCTCAGTA GCCTCCTCCT TATCAGGCCT ATTCCTCTGC CCAGTAAAAA
212951 CTGTTCTGAC CAGGTGCGGT GGCTCATGCC TGTAATCCCA GCACTTTGGG
```

```
213001 AGGCTGAGGC GGGTGGATCA CGAGGTCAGG AGATCTAGAC CATCCTGGCT
213051 AACACAGTGA AACCCCATCT CTACTAAGAA TACAAAAAAT TAGCCGGGCA
213101 TGGTAGTGGG CGCCTGTAGT CCTAGGAATT CGGGAGCTGA GTAGTTAAGG
213151 CAGGAGAATG GCGTGAACTG GGAGGCGGAG CTTGCAATGA GCCAAGATGG
213201 TGNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
213251 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
213301 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
213351 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
213401 NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN NNNNNNNNNN
213451 NNNNNN
        (SEQ ID NO: 3)
```

FEATURES:

```
Start:   2189
Exon:    2189-2270
Intron:  2271-5227
Exon:    5228-5365
Intron:  5366-158436
Exon:    158437-158676
Intron:  158677-161828
Exon:    161829-162013
Intron:  162014-167314
Exon:    167315-167368
Intron:  167369-185990
Exon:    185991-186152
Intron:  186153-188485
Exon:    188486-188653
Intron:  188654-197717
Exon:    197718-197822
Intron:  197823-209669
Exon:    209670-209780
Intron:  209781-210491
Exon:    210492-210803
Stop:    210804
```

SNPs:

DNA Position	Major	Minor	Domain	Protein Position	Major	Minor
177	T	C	Beyond ORF(5')			
2555	–	T A	Intron			
2924	C	A	Intron			
3162	C	T	Intron			
3163	G	T	Intron			
4092	–	A	Intron			
4720	C	T	Intron			
6289	G	A	Intron			
6611	T	C	Intron			
7861	G	A	Intron			
8614	G	T	Intron			
9249	T	G	Intron			
10272	C	G	Intron			
10351	G	T	Intron			
10444	G	A	Intron			
10467	G	A	Intron			
10785	C	T	Intron			
10846	C	T	Intron			
10847	A	G	Intron			
13842	G	A	Intron			
14103	A	G	Intron			
14128	T	C	Intron			
15560	A	G	Intron			
15657	–	A	Intron			
15736	A	C	Intron			
15914	C	T	Intron			
16657	A	–	Intron			
16658	A	–	Intron			
17099	T	G	Intron			
18139	T	A	Intron			

19303	C	T	Intron
19501	C	A	Intron
22852	G	A	Intron
23210	A	G	Intron
24040	G	A	Intron
24536	C	A	Intron
25125	–	A T	Intron
25167	C	T	Intron
25623	T	C	Intron
27143	C	T	Intron
27211	T	G	Intron
27383	G	A	Intron
27553	A	T	Intron
29141	C	G	Intron
30549	C	T	Intron
30984	C	T	Intron
31266	A	T	Intron
31425	T	C	Intron
32198	A	G	Intron
33129	T	C	Intron
33292	G	C	Intron
34124	C	T	Intron
34668	A	G	Intron
34807	A	T	Intron
36025	C	T	Intron
36058	C	G	Intron
36061	G	C	Intron
36418	C	T	Intron
36743	A	G	Intron
36958	T	C	Intron
37577	G	A	Intron
38464	C	T	Intron
38472	C	G	Intron
38509	T	G	Intron
38573	T	C	Intron
38624	G	A	Intron
38802	C	T	Intron
38842	G	A	Intron
39029	C	G	Intron
39040	A	G	Intron
39179	T	C	Intron
39424	A	G	Intron
39459	T	G	Intron
39594	C	T	Intron
40279	A	G	Intron
40666	G	C	Intron
40723	G	C	Intron
41090	C	T	Intron
41260	C	T	Intron
41421	A	G	Intron
42640	C	G	Intron
42650	C	G	Intron
43285	C	T	Intron
44406	A	G	Intron
44585	C	T	Intron
44772	A	G	Intron
45507	C	T	Intron
46883	C	T	Intron
47855	G	T	Intron
47885	C	G	Intron
47941	A	G	Intron
48328	T	A	Intron
48391	G	A	Intron
48453	A	G	Intron
48690	T	C	Intron
49100	T	C	Intron
50598	C	A	Intron
50753	G	A	Intron
54798	G	C	Intron
55058	A	G	Intron
55171	C	T	Intron

FIGURE 3, page 62 of 122

```
55801    G    A    Intron
56324    A    G    Intron
56557    G    A    Intron
56716    T    G    Intron
58247    C    T    Intron
62318    T    C    Intron
62429    C    A    Intron
62449    A    G    Intron
62450    T    A    Intron
62554    G    A    Intron
63688    T    C    Intron
64921    G    A    Intron
64934    T    C    Intron
65150    T    A    Intron
65198    A    G    Intron
65674    A    T    Intron
65720    C    G    Intron
65820    T    C    Intron
65948    T    C    Intron
65978    G    A    Intron
65988    C    T    Intron
66089    G    T    Intron
66332    C    T    Intron
66361    T    G    Intron
67130    G    A    Intron
67148    T    C    Intron
67541    G    T    Intron
67608    G    A    Intron
67670    T    C    Intron
70638    C    T    Intron
70767    T    C    Intron
71275    G    A    Intron
71401    C    A    Intron
71656    C    T    Intron
71969    C    T    Intron
72194    A    G    Intron
72292    A    G    Intron
72351    A    G    Intron
72382    A    C    Intron
72424    G    T    Intron
72466    G    A    Intron
72829    G    A    Intron
72913    G    -    Intron
73395    C    G    Intron
73961    T    C    Intron
75749    T    C    Intron
77275    C    T    Intron
77282    G    A    Intron
81236    T    C    Intron
82536    C    T    Intron
82954    A    C    Intron
84157    G    C    Intron
85443    T    G    Intron
85674    T    C    Intron
85850    G    A    Intron
85905    T    C    Intron
86535    -    G    Intron
87371    C    G    Intron
87392    G    A    Intron
87423    T    C    Intron
87627    T    C    Intron
87637    G    A    Intron
87777    A    G    Intron
87810    C    T    Intron
89812    G    A    Intron
90137    G    A    Intron
90400    G    A    Intron
92359    A    G    Intron
92555    -    T  C  Intron
92641    G    C    Intron
93969    G    C    Intron
```

FIGURE 3, page 63 of 122

```
96601    A    G        Intron
96865    T    -        Intron
98448    A    G        Intron
100137   T    C        Intron
100264   A    G        Intron
100873   T    C        Intron
102673   C    T        Intron
102807   T    A        Intron
102938   A    G        Intron
104061   C    T        Intron
107552   -    A        Intron
110789   T    C        Intron
110884   T    C        Intron
115075   C    T        Intron
115286   C    T        Intron
121154   G    A        Intron
121250   T    G        Intron
124478   G    T        Intron
124841   C    T        Intron
124842   A    G        Intron
128941   G    A        Intron
129471   C    T        Intron
130568   T    C        Intron
132179   G    C        Intron
132792   C    G        Intron
133502   A    T        Intron
133661   A    G        Intron
133768   G    T        Intron
133837   A    C        Intron
134003   A    G        Intron
134098   C    -        Intron
134530   G    A        Intron
134746   T    C        Intron
135854   G    T        Intron
136893   G    A        Intron
136945   C    A        Intron
137997   -    T        Intron
139348   G    C        Intron
139437   A    -        Intron
140321   C    T        Intron
140570   G    A        Intron
141441   T    C        Intron
141639   C    A        Intron
141796   A    -        Intron
141797   -    C  T     Intron
141799   T    -        Intron
142186   G    T        Intron
142212   G    A        Intron
142600   A    T        Intron
142631   T    C        Intron
145397   G    A        Intron
145438   C    T        Intron
145855   A    -  G     Intron
146816   G    A        Intron
147228   G    C        Intron
147968   T    C        Intron
149372   G    A        Intron
149466   G    T        Intron
149468   G    A        Intron
149474   C    A        Intron
151121   G    A        Intron
151984   C    T        Intron
152547   A    C        Intron
152560   C    T        Intron
154834   T    C        Intron
155118   G    A        Intron
156897   C    T        Intron
157808   -    G  T     Intron
159171   A    G        Intron
159465   G    A        Intron
159505   C    T        Intron
```

FIGURE 3, page 64 of 122

```
159786    C         T           Intron
159787    G         A           Intron
160954    -         T  A        Intron
160955    -         A  T        Intron
160959    G         T           Intron
161415    C         T           Intron
161800    -         T  C        Intron
161899    T         C           Exon       177        I           I
162793    T         C           Intron
162919    C         A           Intron
162939    -         A  G        Intron
163647    A         C           Intron
163675    G         A           Intron
165562    C         T           Intron
166011    T         C           Intron
166623    G         A           Intron
167461    G         A           Intron
168935    G         A           Intron
169142    T         G           Intron
169379    G         C           Intron
171315    G         T           Intron
171400    A         G           Intron
172007    G         A           Intron
172220    C         T           Intron
172690    T         C           Intron
174992    C         G           Intron
176676    G         A           Intron
176723    G         A           Intron
176944    A         G           Intron
178739    C         T           Intron
179524    G         C           Intron
179726    A         G           Intron
179901    G         T           Intron
180348    A         C           Intron
180459    A         G           Intron
180786    C         T           Intron
181129    A         G           Intron
181918    C         T           Intron
181936    -         T           Intron
183558    C         T           Intron
184778    C         T           Intron
185666    A         G           Intron
185832    A         -           Intron
187287    C         T           Intron
187351    T         -           Intron
187706    C         T           Intron
188282    A         G           Intron
190074    C         T           Intron
193266    A         G           Intron
193763    G         A           Intron
193782    C         T           Intron
194094    T         C           Intron
194499    G         A           Intron
195249    T         C           Intron
197371    A         G           Intron
198021    T         C           Intron
198039    T         A           Intron
198143    C         T           Intron
198458    C         T           Intron
199076    C         A           Intron
199527    A         G           Intron
199584    C         G           Intron
200070    T         G           Intron
200429    A         G           Intron
200676    A         G  T        Intron
202325    T         C           Intron
202550    C         T           Intron
202609    G         C           Intron
202714    C         T           Intron
202809    A         G           Intron
203159    G         C           Intron
```

```
203168      G           A           Intron
203704      C           T           Intron
204111      G           A           Intron
204132      C           T           Intron
204285      T           A           Intron
204334      T           G           Intron
205015      G           T           Intron
205155      C           A           Intron
205510      T           A           Intron
205712      G           A           Intron
206028      G           A           Intron
206073      G           C           Intron
206487      –           A           Intron
207036      G           A           Intron
209309      G           C           Intron
210867      T           G           Beyond ORF(3')
212386      A           G           Beyond ORF(3')
```

Context:

DNA
Position

177   TTCAAAGTAGTAAGATACAAAAACTGAAAATGGAGAAATTAAAAGATGGAATCATTAAAT
             CAGAGACTCTTAATGTTGGCAGAGACCTTAGAAGTGATCTTTCCTGATTCTGTTCTCTCA
             TCTTCCTATGCTGATGCTTATTCTTCCTTTAGAAGGTTCCTACCCAGTGCTTGCTG
             [T,C]
             TATTAGAGCCTAAGAGTTAAGAGCTGGGGCCTGATGGTGGCATTTACTGTGTTTAAATGC
             CCAATCTCTTTCATTAGCAGTGAAAACTTGGGGTGAGTTTTTAGACCTCTGTTTCTTCAT
             CTATAAAATGGGCATGAGGCTACCTACACAGGTATTGTACAAATAAATGATGCAGGTGCA
             TTTCTTAGCATGGTACCTGGCACATTCAAAATAGTGAATAAACATTAGCCTTAAAAATTA
             TTTTAGCTAATTAATTAATATATGTGAAAGTGCATAGGAAATCACAAAGCATTTGACCTC

2555   AACAATATCCAGATCGGTGAGTGAGGGGGCAGCCTGGGGAGGGACTTTCTGGGTCTGGCC
             AGGGATTTTTTTGGGGATAGGGGTTGTGTACCCCCTCCCCGGTACTGACTGTTTTGCTTG
             GCTCCCTAAAGCTGTGCTGCGGTAACAGAAGGGAGACTTGGGCTTACAGCCAGAGGAGGG
             GGCTTCTCCTGATCGGATGAGGGGCAGAGGGGAAGTGTTCACACACGCACACATACCCTA
             CTCGCACTCCAGGCAAGAGCATGTGAAATGGAGGAACCATCGCTTTGGAGGAAAAAAAAA
             [-,T,A]
             TCAGGCTGGAAAGGGTGGTGGGTGTTTAAGGAGTTAACTCTATTGCTTGGTAGATGGTGC
             TTGATTCCATTTTTAATGTAAGTATGTATGGTGTGTGTGTTTTCACGTGTGTGATTATAT
             ATTACATATGCACATATATATGTAATTGAAGGAGGCAGTGCTTTCTCTGCTGGGGGACAG
             AAAAGAGACCCTCGAGAAGAAGGAGTGAGGGGTGCTGGGTATATTGCAGCCACTGAAATA
             ATGCCAGAAGGCCCCCACTCCAAGGCGGGTAGGCTCCCTCTCCTGTTCTGGACTCCTCCA

2924   ATTTTTAATGTAAGTATGTATGGTGTGTGTGTTTTCACGTGTGTGATTATATATTACATA
             TGCACATATATATGTAATTGAAGGAGGCAGTGCTTTCTCTGCTGGGGGACAGAAAAGAGA
             CCCTCGAGAAGAAGGAGTGAGGGGTGCTGGGTATATTGCAGCCACTGAAATAATGCCAGA
             AGGCCCCCACTCCAAGGCGGGTAGGCTCCCTCTCCTGTTCTGGACTCCTCCAGCTGCCTT
             CTCTTTGCTGTCTGCCATGCTGCGCTGGTGGTCTCCACTCCCCCGATCCTGGAACTTCCT
             [C,A]
             GCCTGCCTTTTCTCCGTTCCTTCCTTGCCCCCTCCTCTTAGATTTCCTATCCACAGAGGT
             CTACCTTTTACACACACAAACACACACGTACACATGCTCCTTTCTCCTCCTGTTGGCT
             CTCCATTATCCTTGTTACTGGGCTCCATCCTCTCAACTTGGAGGCAGGTTTCAACATGCT
             GCATGCTTTTTTTGTTCCCCATTTCCCCTTCTTAGTTGTTACACTTCTCAAAGGCCCCGC
             CACCCTCCCTGTATTTCTGAGGGGACTGACAGATATTGCTACTCCTGATAATCATGAGGG

3162   TTCTCTTTGCTGTCTGCCATGCTGCGCTGGTGGTCTCCACTCCCCCGATCCTGGAACTTC
             CTCGCCTGCCTTTTCTCCGTTCCTTCCTTGCCCCCTCCTCTTAGATTTCCTATCCACAGA
             GGTCTACCTTTTACACACACAAACACACACGTACACATGCTCCTTTCTCCTCCTGTTG
             GCTCTCCATTATCCTTGTTACTGGGCTCCATCCTCTCAACTTGGAGGCAGGTTTCAACAT
             GCTGCATGCTTTTTTTGTTCCCCATTTCCCCTTCTTAGTTGTTACACTTCTCAAAGGCCC
             [C,T]
             GCCACCCTCCCTGTATTTCTGAGGGGACTGACAGATATTGCTACTCCTGATAATCATGAG
             GGAAAGCAAAACAAACAGAAGCAATAACACCAATCACAAAGCATGTCCACAAGGGCTTGG
             GGCTTCCGTGTGACCAGCATGTCAGTGTCGTTTGTGTCCCGGAATGAAGCAAGCTGCTGT
             GTTTGGAAGCATCTTCGTTGGTTTGGTTTCTAGTCTCTCTCCCCTGGTAGGGAGATAGCT
             CCACTAGGGAAAGTTCGCATTGCTGGGAGTTTGTGCTCTTTTGTGAGTGTGTGTTTGAGG

3163   TCTCTTTGCTGTCTGCCATGCTGCGCTGGTGGTCTCCACTCCCCCGATCCTGGAACTTCC
```

## FIGURE 3, page 66 of 122

```
        TCGCCTGCCTTTTCTCCGTTCCTTCCTTGCCCCCTCCTCTTAGATTTCCTATCCACAGAG
        GTCTACCTTTTACACACACAAACACACACACGTACACATGCTCCTTTCTCCTCCTGTTGG
        CTCTCCATTATCCTTGTTACTGGGCTCCATCCTCTCAACTTGGAGGCAGGTTTCAACATG
        CTGCATGCTTTTTTTGTTCCCCATTTCCCCTTCTTAGTTGTTACACTTCTCAAAGGCCCC
        [G,T]
        CCACCCTCCCTGTATTTCTGAGGGGACTGACAGATATTGCTACTCCTGATAATCATGAGG
        GAAAGCAAAACAAACAGAAGCAATAACACCAATCACAAAGCATGTCCACAAGGGCTTGGG
        GCTTCCGTGTGACCAGCATGTCAGTGTCGTTTGTGTCCCGGAATGAAGCAAGCTGCTGTG
        TTTGGAAGCATCTTCGTTGGTTTGGTTTCTAGTCTCTCTCCCCTGGTAGGGAGATAGCTC
        CACTAGGGAAAGTTCGCATTGCTGGGAGTTTGTGCTCTTTTGTGAGTGTGTGTTTGAGGG

  4092  GGGAGCATCATAATCAAGAATTTTTTTTGTTTTCATTCTTTAAAATGGGAGCACTTGTAC
        ATGTGGAAATCACTGGCTCTTACATGTGGCATTGTTTACATTTGTGCTTATATACTACCT
        ATCCTTTGTGGCTTGGAAGTGTTTGTCTAGTATATTTGTGTATATAGTAAATGGTATAAA
        TGCATGAGGATGTTTCATGTATGTGCTATGTTTTCTCATGTATCTCTGCATATTTTTAAA
        ATTATATTTAGCCCTAACTTGGTTGTTCAACTGATAAAGCCATTGCTACTGTTTTCAAAA
        [-,A]
        AAAAAGAGATTGAAGCATTAAATTGTAGAACAAAATGCTGAAAATATCACTGCCATCAGG
        TAGTACTTGATTCTATTTGTGTGATCTGTAACAAAAGGCTTGCAATCCATTTATTGGTTC
        TTAAAAACAGACACCCACTCTACAAGAAGTTAGAAGTGCATTATGTTTGGACTGTGATTA
        CTGTCAGATTTGAGATAAACTTCTATGTAAACATCATTATAGTTCAGTCTCTAGAAATGG
        CTGATTTTAATTCACAGAAATGTAATTGATTTACATGTTGACAGTAAATACAAAGGTAAG

  4720  CATCCCATCAGGCACCTTTACTATACCTTTTACTAGAATAGAATGTTTGTATCCTCTTGA
        GATGCCTAAGATCCCACATCTTTGAAGCACAAGGTTCCACCATGCAAACACACAATGGCA
        ATCCCTTATGTAACAAGTCATTCCTAGGTAACTGGGATCATGTGTGGTGAAAGAGTAAGC
        AAAACATTGTTTGCAGAAAAGCAAGAGTTTTTAGAGAAAATGAATAATAAACCTTAGGGG
        CAATAGAATAGTTAAATTGCATGCAGGTCTTGCTAGGCCAAAGACTAAAAACTGTCCATG
        [C,T]
        AAACAGTTATAGTAGTGGAGAAGCCCACAGGGTCCCAGAGCTAGATTTCAATCACCCTGC
        AGCACTGATTAGTACCTACTTCCCGTAAGGCTCTCTGGTGAGAGATGAGGCTGATGTAAG
        AAAAATTAGACATGACTAGAGGGTGAGGGGGCTTATGTGTATGTTTATATAAGAGAATAG
        CAGCTCCTAGGTGGTTTGCACAAGGGAGGAAGAAGAGAAATGGCACAAGTCTCCTGTTTT
        CTCTGACTTTAGCTGAGTTGAGGGGTACACAATCAAATGTTTGAGCAAAGTAATAGATAT

  6289  CATCTGAATTGAATGCATTGTAAAATGTGGGCAACAAACACCATTCTGAGTTTTCCTGGC
        AACTAGGAATGAAAAGGAAGCCTGTGCTCACATGATTGGCTTTTCATGACAGATGAAAGC
        ATAAAAATTAATCAGGAAACATATTTTCCCTTCAGGGATTAAGCTCAAGTAAAAATTTAT
        GGCAGGGAAATGTGAGCTGAATTCACAAGAACAATTTGAGACCCCAAACTGGATTGAATT
        GGCACGATAGTCTTGGTGTGTCACTATTGACTTGGTGACTTCTGCTGAGCTGTCTCTGGT
        [G,A]
        GAAGTCATGGACCATATTTCCTTTGTGTCTTTCTCATAGTCCCACTGGTGAGTTCTCAAT
        GATTTGAATAGGCTATGCTTTGAAGTCTCAAAATGAGAAGTCAGAATTCTTTCTATCCCA
        AAGACCACTCCTAAAATAATGTTGTTACAAATTCCAAGAACTATAATTATAGCAGATTTC
        ATTTATTGAGAACTTACTGTGCATCAGAACTATGATAAATACTTTATAGTCATTTATAGT
        CACATTCATTACCATGTATTAAGCACTGACTACAGCCCATGTAATGCACTAATTGCTTTT

  6611  TTTGTGTCTTTCTCATAGTCCCACTGGTGAGTTCTCAATGATTTGAATAGGCTATGCTTT
        GAAGTCTCAAAATGAGAAGTCAGAATTCTTTCTATCCCAAAGACCACTCCTAAAATAATG
        TTGTTACAAATTCCAAGAACTATAATTATAGCAGATTTCATTTATTGAGAACTTACTGTG
        CATCAGAACTATGATAAATACTTTATAGTCATTTATAGTCACATTCATTACCATGTATTA
        AGCACTGACTACAGCCCATGTAATGCACTAATTGCTTTTTATGTGTTAGCTCATTTAATC
        [T,C]
        TCACAGGAGCTTTGCAGAGTACTAGACATTATCTTCCTTTTAGAGATGAGAAAACTGAGG
        CTACAACAGATTATATAACTTGCCCAAGGTTACTCAGGAAGCAAATGGTGGTTTTGAGAC
        CTGAAGGTCCATGTTCCTGGATACTGTGACAGATACACTGATTCTTATGGTACCCTAATC
        AACTAGTGGGATTACCCAAGAAATGAAAGGGAATTTTCAGGGTCTTGTAAGGCAGAGGTC
        TAATAAAGTACCTAAGGAGAAAAACTTACAGTGTTTCAAACTGTAGCTATGATTTGCACA

  7861  AGGCCTGGAGTGGATGAATCTGAGTTCTTGAACTTGATGCTGCCATCCATGAACTAGTGT
        ACAGGTTTCCATGAATTCCTGTCTTGTTCGTTCAGTTAATTCTTTAAGTGTTTCTTCAAA
        GCTATAAACTGAAATAGATATTGGAAATACAGAGATGATAAAATGCCCTTGCTCTCAGGT
        AGCTTACAGTCTAGTGGGAAACATTGTTATGGGGATTATCTGAGAAGCAATAATCTTATT
        TTGTGCTTAGACTTTGTGTTTCTTTTCTTTAGCTCCCAGATCCCAAAGGGGGTACTGGGC
        [G,A]
        AGTTAGGTGGAAATGGTGGCCTGGCTGGAGGAGCCTCTCTTAAATTTCATGTAAGGCTAG
        GAATACTTTAGGGCTGTGTTCACTGTGGTCCATTGGTTTGGGAAAACTTTACATCTGTCC
        CAATTTTAATTGAGTAAAAAATGTCAGTGGGAGCAAAGCAGTTTTAGGAAGAATGTACTC
        ATTACTGATACATGGAAAAGCAAGAAAAGCATCTTATTCAGACTAATTTTCTGTGCTGTG
        TTTTTTGAAATCTGAATTAGTAGTTGCCTTAAATTAACTGCCCAATAAGTCTTAGATCTA
```

FIGURE 3, page 67 of 122

```
8614    TAGCAGCAGGGGACTAAAAATGAGGAGAGGTGGTTATATGGTAGGGAAGGTGGGGAAGAT
        AGAAGAGGACTATGGCTACTACTACTGGCCAAGGTGAGAGTTTGGTGCCTTCTTCGTGTT
        CAATCTTTCTTGCTTCCCTGGTCTGCCATTGTTAAAGAGTAAAGCCATTGAATCAGCAAC
        CCAATGCCTTGGGATCTCCTTTAAGCACTTTTCCAAGCTTACAGGGGTAGAGTTTGGGGA
        GATTGTGCATAGAGAAGATATTTACTGATCAGCTACCCAGCTTATTTTGGTGCCTTTGTG
        [G,T]
        TAAGTGTAAATAAAGGAATAAATGAAATGCTGATTGAGATTATTACTATTAGAGGTCTGA
        GTAGCATAGTTGCAGCTTAATTCTTACCTTTTAATTTATTCACCTATTTATTCATTCATT
        CATTCAGCAAGTATATACTGAATGCCTACTTCATGCCAAACACTGGGCCAGACGCTAGGA
        ATATAGGGGCCAGGAAAGAAGGCACAGCCTCTTTCCTTGTGGAGCTAACAGTTTAGCCCA
        GAGGTTCACAAACTTCAGTGCACTTAAAATTCACTCAGGGAGCTTGTTTAAAGCAAGACT

9249    TCAAGAGTAGGCCCTGGAGGAATTCTATAGCAATTATTATGGGGATTACACTTTAAGAAT
        CTCTTTAATCTAAAAAGTCTTCCATCCCTTTAGTAAGCATTTTTGAGCCCTCAACCAAAC
        CTAGGCATGACATAAAGTGCTACAAATGCAGACAACAGTAAGTTGCATTCCCCACCCTGG
        AGTACTTTATCCATAGTAAGACATTTTCTATCCTGTAAAGAGAAAATTAAAATGTAATGT
        TGTAAGTGCTATAGCAGCAATTTGTATGGAGTATTGAAGATTCCTTGAAGAGTGGAGTTT
        [T,G]
        TCTCTAGGAGGTGGTGATTGAATTGAGCCTCAACGATAAATAGGGTTATCTATCTGCAGA
        AGGGGTCACCAAATATAGCCATCCACAAGCCAGTTCCAGCACAGAGACTGAGTTCTGGGC
        CCATACACTGTGTAAGAACCATGGAATTTCACATTAGAACTTGGACATCTTGTCTTGACT
        AATATTTTTAAATATTAAAATATCTGGCAACACTAGGGCCCAGGTCTATGCAGCCTCAAT
        TTGCTGAGATGGGACAGAGTAAACCCCATCTACATGGCCTCTTTCCCAATCAGCCCATTC

10272   TTTCTTGACCTACACAATGCTTTTTCATATTTGGCATAAAAATCCAGATTTCTGGCATCT
        TTAAAAAAAAAACTTAGGGCATTAAGCAACCCTAGGCCCACATTCCTGCTTAACTTCTAT
        TTTCTAGAGCTGAGAAGTGCTGCCCTTTTTAAATACATAAACTCCCAAGTTAACCAAAGT
        TTCCATTACTTCCTGTTTGATTGCTAGAGTAATCAAATTATGTTGTTTGGGCAGGCCTGT
        AAGTAGGCCAATCTACTCATACCTGATTTATATCGTCAGCATTCATCATTTTATTATTTT
        [C,G]
        TTCTAATAATATCTATTACTTACCCTGTCAAAAATAATAAAAGACACAAAAGATGTATAA
        CTCCTACTCTCAAAAAAAGTAGTGTGTATACAGTAATGAAGAGAATGGTGGCTGATGGTG
        GGATAAACAAGAATTATTTTGAAGACCTACTATGTGCCAAATACTTTGCAGGTGTTGTCT
        TAAGTTTTATAACTGTCTTGAAAGGTGATTATCCCCATTTCATTGATGATGGTACTGAGA
        CTGAGAGAGATTGTGTCTTCTTTATATTATGCAACAAATAAAAACCTAAGCTAGTATTTA

10351   CATTAAGCAACCCTAGGCCCACATTCCTGCTTAACTTCTATTTTCTAGAGCTGAGAAGTG
        CTGCCCTTTTTAAATACATAAACTCCCAAGTTAACCAAAGTTTCCATTACTTCCTGTTTG
        ATTGCTAGAGTAATCAAATTATGTTGTTTGGGCAGGCCTGTAAGTAGGCCAATCTACTCA
        TACCTGATTTATATCGTCAGCATTCATCATTTTATTATTTTGTTCTAATAATATCTATTA
        CTTACCCTGTCAAAAATAATAAAAGACACAAAAGATGTATAACTCCTACTCTCAAAAAAA
        [G,T]
        TAGTGTGTATACAGTAATGAAGAGAATGGTGGCTGATGGTGGGATAAACAAGAATTATTT
        TGAAGACCTACTATGTGCCAAATACTTTGCAGGTGTTGTCTTAAGTTTTATAACTGTCTT
        GAAAGGTGATTATCCCCATTTCATTGATGATGGTACTGAGACTGAGAGAGATTGTGTCTT
        CTTTATATTATGCAACAAATAAAAACCTAAGCTAGTATTTAAAGCCAGTTTGGGGGGCTC
        CAAAACTCAATGAGCATTCTCCTTTTAAAGATCTATGAATATGGCCAGGGGCAGTGGCTC

10444   ACCAAAGTTTCCATTACTTCCTGTTTGATTGCTAGAGTAATCAAATTATGTTGTTTGGGC
        AGGCCTGTAAGTAGGCCAATCTACTCATACCTGATTTATATCGTCAGCATTCATCATTTT
        ATTATTTTGTTCTAATAATATCTATTACTTACCCTGTCAAAAATAATAAAAGACACAAAA
        GATGTATAACTCCTACTCTCAAAAAAAGTAGTGTGTATACAGTAATGAAGAGAATGGTGG
        CTGATGGTGGGATAAACAAGAATTATTTTGAAGACCTACTATGTGCCAAATACTTTGCAG
        [G,A]
        TGTTGTCTTAAGTTTTATAACTGTCTTGAAAGGTGATTATCCCCATTTCATTGATGATGG
        TACTGAGACTGAGAGAGATTGTGTCTTCTTTATATTATGCAACAAATAAAAACCTAAGCT
        AGTATTTAAAGCCAGTTTGGGGGGCTCCAAAACTCAATGAGCATTCTCCTTTTAAAGATC
        TATGAATATGGCCAGGGGCAGTGGCTCACACTTGTAATCCCAGCACTTTGGAAGGCCGAG
        GTGGGCAGATCATGAGGTCAGGAGATTGACACCATCCTGGCTAATACAGTGAAACCCCAT

10467   TTTGATTGCTAGAGTAATCAAATTATGTTGTTTGGGCAGGCCTGTAAGTAGGCCAATCTA
        CTCATACCTGATTTATATCGTCAGCATTCATCATTTTATTATTTTGTTCTAATAATATCT
        ATTACTTACCCTGTCAAAAATAATAAAAGACACAAAAGATGTATAACTCCTACTCTCAAA
        AAAAGTAGTGTGTATACAGTAATGAAGAGAATGGTGGCTGATGGTGGGATAAACAAGAAT
        TATTTTGAAGACCTACTATGTGCCAAATACTTTGCAGGTGTTGTCTTAAGTTTTATAACT
        [G,A]
        TCTTGAAAGGTGATTATCCCCATTTCATTGATGATGGTACTGAGACTGAGAGAGATTGTG
        TCTTCTTTATATTATGCAACAAATAAAAACCTAAGCTAGTATTTAAAGCCAGTTTGGGGG
        GCTCCAAAACTCAATGAGCATTCTCCTTTTAAAGATCTATGAATATGGCCAGGGGCAGTG
        GCTCACACTTGTAATCCCAGCACTTTGGAAGGCCGAGGTGGGCAGATCATGAGGTCAGGA
        GATTGACACCATCCTGGCTAATACAGTGAAACCCCATCTCTACTAAAAATACAAAAACTT
```

10785   CCCCATTTCATTGATGATGGTACTGAGACTGAGAGAGATTGTGTCTTCTTTATATTATGC
AACAAATAAAAACCTAAGCTAGTATTTAAAGCCAGTTTGGGGGGCTCCAAAACTCAATGA
GCATTCTCCTTTTAAAGATCTATGAATATGGCCAGGGGCAGTGGCTCACACTTGTAATCC
CAGCACTTTGGAAGGCCGAGGTGGGCAGATCATGAGGTCAGGAGATTGACACCATCCTGG
CTAATACAGTGAAACCCCATCTCTACTAAAAATACAAAAACTTAGCTGGGCGTGGTGGCA
[C,T]
GCACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACTCAGGAGG
CAGAGGTTGCATTGAGCCAAGATCACGCCACTGCACTCCAGCCTGGCAACAGAGCGAGAA
TTTGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCTATGAATATATGGACAGAGAAAA
GTACCATAGCAGTGAAATAGCCCAACGGTAGAAGTGTCACAGTGGAATTTATGATTCAAG
CTTAAGAGCTAAGTCTTCCAAGGCAGAAGCTATGACTGTGGATGATGAAAACTTCTTGGG

10846   ACAAATAAAAACCTAAGCTAGTATTTAAAGCCAGTTTGGGGGGCTCCAAAACTCAATGAG
CATTCTCCTTTTAAAGATCTATGAATATGGCCAGGGGCAGTGGCTCACACTTGTAATCCC
AGCACTTTGGAAGGCCGAGGTGGGCAGATCATGAGGTCAGGAGATTGACACCATCCTGGC
TAATACAGTGAAACCCCATCTCTACTAAAAATACAAAAACTTAGCTGGGCGTGGTGGCAC
GCACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACTCAGGAGG
[C,T]
AGAGGTTGCATTGAGCCAAGATCACGCCACTGCACTCCAGCCTGGCAACAGAGCGAGAAT
TTGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCTATGAATATATGGACAGAGAAAAG
TACCATAGCAGTGAAATAGCCCAACGGTAGAAGTGTCACAGTGGAATTTATGATTCAAGC
TTAAGAGCTAAGTCTTCCAAGGCAGAAGCTATGACTGTGGATGATGAAAACTTCTTGGGG
AAGGTGGAACTTTAGCAGGCATTAAAGGGTGGAGCAGATTTTGGTTGTGGAGTGGGAGGA

10847   CAAATAAAAACCTAAGCTAGTATTTAAAGCCAGTTTGGGGGGCTCCAAAACTCAATGAGC
ATTCTCCTTTTAAAGATCTATGAATATGGCCAGGGGCAGTGGCTCACACTTGTAATCCCA
GCACTTTGGAAGGCCGAGGTGGGCAGATCATGAGGTCAGGAGATTGACACCATCCTGGCT
AATACAGTGAAACCCCATCTCTACTAAAAATACAAAAACTTAGCTGGGCGTGGTGGCACG
CACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACTCAGGAGGC
[A,G]
GAGGTTGCATTGAGCCAAGATCACGCCACTGCACTCCAGCCTGGCAACAGAGCGAGAATT
TGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCTATGAATATATGGACAGAGAAAAGT
ACCATAGCAGTGAAATAGCCCAACGGTAGAAGTGTCACAGTGGAATTTATGATTCAAGCT
TAAGAGCTAAGTCTTCCAAGGCAGAAGCTATGACTGTGGATGATGAAAACTTCTTGGGGA
AGGTGGAACTTTAGCAGGCATTAAAGGGTGGAGCAGATTTTGGTTGTGGAGTGGGAGGAG

13842   ATGACCTTGTTTACTTTAGCTTCCCATCACAGTCTCCACCACAGTATAGTGTTCAGTGGT
GCTAGATGAATGAAAGAATAGATGGCAGTGACAAGAATAAGCCTGAATCATTGCTGCTTA
GGGTAATGCTTTTGATATTATGAGTTTTGAGAGTTCCAACAGGCTGTGCTGTAAATACCT
ATGGATGGTTATTACTGTGTAGCTCCAAAGTTATGGGGGTGAAAATCAGGTGTAAGTCCA
ATTGAAAGCTCATTTTAGCTCCCGCTGGACTATTGTCATGAGGGGTCCTAAATAAGGTAT
[G,A]
AGGTTCCATCTTCTAAATAAAGAATTTCTGATTCAAGCCCTGGGTTTGCCATTGATGTAT
GAGCCTTGTATGCATCTTACGACTTTGGTGTGTCCCAGCCTGCTGTCCAGAAAGCACAGG
GGAGCCCAGGGCCATGGGAGGTCCAGGTTGAGGAGGCAGGCAAAACTGGGGCAAATGAGG
CAGTTGGAGGCTAATGAAATTGATACCCTATGGTTAGGCGTGTTTCCATGTGTTCATTGT
TTGGAACCTCTAGGATGAAAATAAAGTTTGAGAATAGCCTTTAGTTTGTCTACAAAAGTA

14103   CCGCTGGACTATTGTCATGAGGGGTCCTAAATAAGGTATAAGGTTCCATCTTCTAAATAA
AGAATTTCTGATTCAAGCCCTGGGTTTGCCATTGATGTATGAGCCTTGTATGCATCTTAC
GACTTTGGTGTGTCCCAGCCTGCTGTCCAGAAAGCACAGGGGAGCCCAGGGCCATGGGAG
GTCCAGGTTGAGGAGGCAGGCAAAACTGGGGCAAATGAGGCAGTTGGAGGCTAATGAAAT
TGATACCCTATGGTTAGGCGTGTTTCCATGTGTTCATTGTTTGGAACCTCTAGGATGAAA
[A,G]
TAAAGTTTGAGAATAGCCTTTAGTTTGTCTACAAAAGTAATATATACATTACAGAAAGCT
ATAGGAACAGAGACAGCAAACACAATAAAACTTGTATAATTATAGTACTAAGGATACATT
TTCCATCCTTTTTTGAACCTAACAATTTAAACATTAATAGATTTATCTTACTGTCTTATA
ACATGATTTTTTGCATATTACAACCTTTAGGCTACTTTTATTATTGCACATTCATTTTTA
ATGGTTTCATAAAAGCCCACTGTACATATGTACCCTAATTTATTTAAGCTGTCTCCTTTT

14128   CCTAAATAAGGTATAAGGTTCCATCTTCTAAATAAAGAATTTCTGATTCAAGCCCTGGGT
TTGCCATTGATGTATGAGCCTTGTATGCATCTTACGACTTTGGTGTGTCCCAGCCTGCTG
TCCAGAAAGCACAGGGGAGCCCAGGGCCATGGGAGGTCCAGGTTGAGGAGGCAGGCAAAA
CTGGGGCAAATGAGGCAGTTGGAGGCTAATGAAATTGATACCCTATGGTTAGGCGTGTTT
CCATGTGTTCATTGTTTGGAACCTCTAGGATGAAAATAAAGTTTGAGAATAGCCTTTAGT
[T,C]
TGTCTACAAAAGTAATATATACATTACAGAAAGCTATAGGAACAGAGACAGCAAACACAA
TAAAACTTGTATAATTATAGTACTAAGGATACATTTTCCATCCTTTTTTGAACCTAACAA
TTTAAACATTAATAGATTTATCTTACTGTCTTATAACATGATTTTTTGCATATTACAACC
TTTAGGCTACTTTTATTATTGCACATTCATTTTTAATGGTTTCATAAAAGCCCACTGTAC

```
                   ATATGTACCCTAATTTATTTAAGCTGTCTCCTTTTATGGGATATCTAGTTTATTTCCCTT

        15560      TCAGATCCCAGCACTGGCAGCCTTCACCTGCCCAGCTACAAGTCCAGTGGAAAGGAAACT
                   TCTCTTTTCTCATCAGTTCCACAAAAGTCCTGGGCCTGATGTCATTGGATAAAACTTAGG
                   ACACATGCTCATTTCTGAATATGACACAGTGGCCAGGATATTGTAGTCTTTTGCTTGACA
                   TGGGCCTAGTGAAATCATCATTTTTAGAGCTTGGGGTAGTGAGAAGAACCAAAAGATTGT
                   GGATTTAAGCCAGCCCACCAAAACCATACGGACATGGGGGAGGAATAATTCCCTCAAAGG
                   [A,G]
                   AATCAGGATGCTATTACCAAAAGAATGGAGATTGAATGCTTGAGAGGCAAAATAGATATA
                   TATATATATTTTTGTCTATTAAGCATATATATATATACACTATCTATATATAGATGTAAA
                   TGTATTTATTGTCTATTTTATGTATTTATTGTAAATAAATACATTTACTCTCTCTATATA
                   TATATTCTATCTATATATAGATGTCCCCCATTGCACATCTTTTCAGAAAAGAAAATTCAG
                   ACAGGCTGGAGCTGAACCAATGCAGACAAAAAGTCAACATGCTAAAGTCAGAAGAGCCAC

        15657      GATGTCATTGGATAAAACTTAGGACACATGCTCATTTCTGAATATGACACAGTGGCCAGG
                   ATATTGTAGTCTTTTGCTTGACATGGGCCTAGTGAAATCATCATTTTTAGAGCTTGGGGT
                   AGTGAGAAGAACCAAAAGATTGTGGATTTAAGCCAGCCCACCAAAACCATACGGACATGG
                   GGGAGGAATAATTCCCTCAAAGGGAATCAGGATGCTATTACCAAAAGAATGGAGATTGAA
                   TGCTTGAGAGGCAAAATAGATATATATATATATATTTTTGTCTATTAAGCATATATATAT
                   [-,A]
                   CACTATCTATATATAGATGTAAATGTATTTATTGTCTATTTTATGTATTTATTGTAAATA
                   AATACATTTACTCTCTCTATATATATATTCTATCTATATATAGATGTCCCCCATTGCACA
                   TCTTTTCAGAAAAGAAAATTCAGACAGGCTGGAGCTGAACCAATGCAGACAAAAAGTCAA
                   CATGCTAAAGTCAGAAGAGCCACCAATGAGACAAGCACATACAAGGGATTCTGGTGGGTA
                   AGTCAAGATCAGAAGTCAGGACAGGCAAAAGGTCTGAAATTCAGGCTTCTGAGTTAATCA

        15736      GACATGGGCCTAGTGAAATCATCATTTTTAGAGCTTGGGGTAGTGAGAAGAACCAAAAGA
                   TTGTGGATTTAAGCCAGCCCACCAAAACCATACGGACATGGGGGAGGAATAATTCCCTCA
                   AAGGGAATCAGGATGCTATTACCAAAAGAATGGAGATTGAATGCTTGAGAGGCAAAATAG
                   ATATATATATATATTTTTGTCTATTAAGCATATATATATATACACTATCTATATATAGAT
                   GTAAATGTATTTATTGTCTATTTTATGTATTTATTGTAAATAAATACATTTACTCTCTCT
                   [A,C]
                   TATATATATTCTATCTATATATAGATGTCCCCCATTGCACATCTTTTCAGAAAAGAAAAT
                   TCAGACAGGCTGGAGCTGAACCAATGCAGACAAAAAGTCAACATGCTAAAGTCAGAAGAG
                   CCACCAATGAGACAAGCACATACAAGGGATTCTGGTGGGTAAGTCAAGATCAGAAGTCAG
                   GACAGGCAAAAGGTCTGAAATTCAGGCTTCTGAGTTAATCAAAGCTGTAGGGGTCTTTGG
                   TAATCCTTGTCCAGCCACGAGCAAACCTGTGTTCACAGAACAGTTAGAAAGTGCTAGCCA

        15914      AGATATATATATATTTTTGTCTATTAAGCATATATATATATACACTATCTATATATAG
                   ATGTAAATGTATTTATTGTCTATTTTATGTATTTATTGTAAATAAATACATTTACTCTCT
                   CTATATATATATTCTATCTATATATAGATGTCCCCCATTGCACATCTTTTCAGAAAAGAA
                   AATTCAGACAGGCTGGAGCTGAACCAATGCAGACAAAAAGTCAACATGCTAAAGTCAGAA
                   GAGCCACCAATGAGACAAGCACATACAAGGGATTCTGGTGGGTAAGTCAAGATCAGAAGT
                   [C,T]
                   AGGACAGGCAAAAGGTCTGAAATTCAGGCTTCTGAGTTAATCAAAGCTGTAGGGGTCTTT
                   GGTAATCCTTGTCCAGCCACGAGCAAACCTGTGTTCACAGAACAGTTAGAAAGTGCTAGC
                   CATTCACCCACATAGAAGCGACTGGGAGGTGGTCTCTCCAGGCCACTCTGATAATAAGTT
                   GAGGTTGTCGGCTGTAAAATGTTTGGTGATCCTGAGGCACCAATACTCTGTCCCAGTGAC
                   CAGGACATTTCCTGCTCTACTCAAACACTCAAGCTATTGTGCACAAACTCTTTAACAGTC

        16657      ATGAAGGAGGCTTTAACCTCTGTTAAACAAGCAGAGATCTCAAGCTGGCTCCTGTCCAAG
                   GCAAACAGGGCAGTATGGTTCTTTTACATAGGTCATGGATTTACAGGGGACTGATATCCT
                   AAGACTAACACTGATGAGGCACAAGACTGTAATGATTGAAAAGTGGTTTAGCTACAAAGG
                   TCAACTGATTTGGGGGAAGGTGCACTTGTTTATTCAATAATTGATATTTGTGGAGCATCG
                   TGGTAGATGAGATTATTATTTGGCAATTATTTCTCTCTCCCTCAAACTCCTTGGGAAAAA
                   [A,-]
                   ATATAACTTCCTGCTTCATTAATGTCACATTTGGTCATTTGACATGCTCTGGCAACTTAG
                   ATATTAGTAGATATGTTTGAAGCAGAGATTATGAGAAGAACATGCCCCAGAGAGCCTGCT
                   CGTCTCATAGGAAAGGTAAATACAGTAAGTAGAAGTGTCCCAGTCAACCCACAGCCCACA
                   GACTAAAGTTTGAAGCAGAGCTATCCCAGCTGACCTGAAAATCTGTGAGCATTGTAGGAA
                   ATGCTCAATGTTATATACCACTGAAATTGGAAATGGTTTGTTTTGCAGCAATAGCTGGCC

        16658      TGAAGGAGGCTTTAACCTCTGTTAAACAAGCAGAGATCTCAAGCTGGCTCCTGTCCAAGG
                   CAAACAGGGCAGTATGGTTCTTTTACATAGGTCATGGATTTACAGGGGACTGATATCCTA
                   AGACTAACACTGATGAGGCACAAGACTGTAATGATTGAAAAGTGGTTTAGCTACAAAGGT
                   CAACTGATTTGGGGGAAGGTGCACTTGTTTATTCAATAATTGATATTTGTGGAGCATCGT
                   GGTAGATGAGATTATTATTTGGCAATTATTTCTCTCTCCCTCAAACTCCTTGGGAAAAAA
                   [A,-]
                   TATAACTTCCTGCTTCATTAATGTCACATTTGGTCATTTGACATGCTCTGGCAACTTAGA
                   TATTAGTAGATATGTTTGAAGCAGAGATTATGAGAAGAACATGCCCCAGAGAGCCTGCTC
                   GTCTCATAGGAAAGGTAAATACAGTAAGTAGAAGTGTCCCAGTCAACCCACAGCCCACAG
```

FIGURE 3, page 70 of 122

```
        ACTAAAGTTTGAAGCAGAGCTATCCCAGCTGACCTGAAAATCTGTGAGCATTGTAGGAAA
        TGCTCAATGTTATATACCACTGAAATTGGAAATGGTTTGTTTTGCAGCAATAGCTGGCCA

17099   ACAGTAAGTAGAAGTGTCCCAGTCAACCCACAGCCCACAGACTAAAGTTTGAAGCAGAGC
        TATCCCAGCTGACCTGAAAATCTGTGAGCATTGTAGGAAATGCTCAATGTTATATACCAC
        TGAAATTGGAAATGGTTTGTTTTGCAGCAATAGCTGGCCAATAGAAGCAACCAGCGTGTG
        TTCCACACTTTGCTAGGCACTGAGGGAACATTGGAAATGACAGACATAGTCCTGGTCTCC
        ATGGAGCACTATTGTAGCTAGGAAGATAGACAATGAATACATTTACAAATAAAATATATA
        [T,G]
        AGAGAGATCATTACTAGGGTCATAAAGAAAATAGGATGTAGTGACATCACCACTATGGTA
        GAGAAGAACACCTTTAAAGTAAGTGGTCAAAGAAGGCATTTCAAAGGAGGTGACTTCTGA
        GCTCAGATATAAAAGTTGGAAGAGAGCCAAATGAGAGTAAATTCCCCTGTGGAATGTCGA
        AATCCAGCCCCATGGGCAACTTGGATTGAGAATCTTGGTCTAGGCAGAGGAGAATGAGGT
        GCCCTGGAAAAATCTCCTGCAAACTAGGTCACTCACTTGTCTTAGGGCAGATACTAGCTT

18139   TAGAAAGGAGTCTCCCTTGAGCAAGCAGGATAAGCTCCAGCATCCCTAATCTATCTGGTA
        AAGGCTATAGAGGTGTCACACCTACAAGGGAGAACAAAGAACATCTAATGCAAGCCCTCT
        GTTTAATCTTCACTCCAGACACTGAAAAGCAAGAATGTTGGGGGACAGGAAGCTCACAGC
        GCCCGCATGGAATTTAGACTCCAAGTAGTTTATTAGCTTTGGGAAAATTATTTAACTTAC
        ACTGCACTTACTAGCTCTTCTTCCTTACTCCAAGATCACTCTGAATACTTTAAAATATGG
        [T,A]
        TGGACATGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGGCAGATCA
        CTTGAGGCCAGGAGTTCGAGATCAGTCGGGCCAACATGGCAAAACCCTGCCTCTACTAAA
        AAATACAAAAAATAGCTGGCATGGTGGCACACACCTGGAATCTCAGCTACTTGGGAGGCT
        GAGGCACGAGAATTACTTGAATATGGGAGGTGGAGGTTGCAGTGAGCCAAGATCAAGCCA
        CTGCACTCCAGCCTGGGAGAAAGAGTGAGACTCCTTCTCAAAAAATAATAATAATAAATA

19303   ATTTATTGAAGACTATTTCTGATCATCAAGCTTCTTGTCTCAAAAAAAATATCAGTGGCTT
        CCCATCTTATTTTAAGTTCAAACTCAGACTAAAATATGAGTCTCTCCATAATGGGTCTCT
        GCCTGCCTTCCTTTTGAGACTTACCTAAACCCTACACTCTATGTTCCAGCCAAACTAGAC
        TACCTAGTGTTGCCACAAACATGCCTCTCAGTCTTTCACTGCTTTGGTCATACTACTGAT
        TCCATCTGAAATAGTCTCTACCACATTGAGCACCCACTCTCTACTAAACCCTGGAGATAC
        [C,T]
        GCAGAAAACAAAACCAGCAAACTCCCTGTACCCTTGGGGTTTACGTCCTGGGAAACAAAT
        ACATATAATGATTTCAAATACTAGTTAAATGATACAAACATAGCCAAATAGAGTCATGGG
        ACAGAGAGTGAGCTGTAGTGCTACATTAGATGGGTGGTCAGGGAGGACAGGCATCACCTG
        AAGAGATGATATTTTAACTGAGCCTTGTTGCAATCCATAGAACTTTCTGCAGTGTTGGGA
        GACATTCTATATCTGTGCTGTCTAATATGTAGGCACTAGCAACATCTGCCCCTATTACAC

19501   ACATGCCTCTCAGTCTTTCACTGCTTTGGTCATACTACTGATTCCATCTGAAATAGTCTC
        TACCACATTGAGCACCCACTCTCTACTAAACCCTGGAGATACCGCAGAAAACAAAACCAG
        CAAACTCCCTGTACCCTTGGGGTTTACGTCCTGGGAAACAAATACATATAATGATTTCAA
        ATACTAGTTAAATGATACAAACATAGCCAAATAGAGTCATGGGACAGAGAGTGAGCTGTA
        GTGCTACATTAGATGGGTGGTCAGGGAGGACAGGCATCACCTGAAGAGATGATATTTTAA
        [C,A]
        TGAGCCTTGTTGCAATCCATAGAACTTTCTGCAGTGTTGGGAGACATTCTATATCTGTGC
        TGTCTAATATGTAGGCACTAGCAACATCTGCCCCTATTACACATTAGAAATGTAGTGAGC
        ATGACTGAGGAACCAAATCTTTCATGTAATTTAATTTTTATTAATTGTAATTTAAAAAGT
        CACATGTGGCTAGTGACTGTCATATTAGACAGTGCTAATCTAGATTCTAGAATATTTCAG
        ACAAGAAAAAAAAAACAGTAAGCATAAAGGCTTTAAATGAGAGTGAGTGTATATTCAAAG

22852   GAACCCAGGGCTTTTATTGACCTGGTTGGCTGAATCATTGTATGTAGAGGTGAAGTAAAG
        GCAGTGCAGGTGCAGGTGCAGTCACAGATCATGCTTTTATACTTGTGGCATGTATAGGAA
        ATGTTGAATAAGCTCATCTCTGGATGGGGATTTTAGTACGTTAATAAAGGGAGTTCACCA
        AAGTTCATCTCCAACTCAGGCATCTCAACCAGTTTTTGTTTTTTGGGCTTCTTCCTGGAA
        TTTTTTTTTGAAACAAGAACTCAAGGTGCAACAGTTACAAGTGTGTAATTTCTCATTGTGT
        [G,A]
        TACCCAACAATCTGGGGACCCTGAGTTATAACTCTTTTTGCTGAATTTGTGAATAATGTC
        TTGTGATGTTTAATCCTGTTTTACATATGGTGAAACTAAGGCTGAGAGCATACACAGGGA
        TTTATCTGCAGTCAGGTAGCAGCCAGGTCACGATGCTAACACAGAACTTTTGACCGTCAC
        CCAAGGCCTCCTACTCTTCCAGGCTCCCTGTCAATTTTTGGAGCCAGTCCTCTAAACAGT
        TTTACCCAGAACAAGGAATTGCCGGTGATTTCAGAAAGAACTGGCAGACTCGGGGGAGGC

23210   GTCTTGTGATGTTTAATCCTGTTTTACATATGGTGAAACTAAGGCTGAGAGCATACACAG
        GGATTTATCTGCAGTCAGGTAGCAGCCAGGTCACGATGCTAACACAGAACTTTTGACCGT
        CACCCAAGGCCTCCTACTCTTCCAGGCTCCCTGTCAATTTTTGGAGCCAGTCCTCTAAAC
        AGTTTTACCCAGAACAAGGAATTGCCGGTGATTTCAGAAAGAACTGGCAGACTCGGGGGA
        GGCACTTGCCAAATTGGCTCAGGCTGGCCTTGCTGCCATGCTTCTTTTCCTCGTTCCTGC
        [A,G]
        AAGCCAGTTCTAGGTAACCTACCTGCAGATGTCTACCCTGAAATAACACCCAGCCTCTGT
        TACACTGCTGTTACACACAAACAAACAAAGCAAATCTGCTGCAAAAAGAGGCAGGTTGAA
```

FIGURE 3, page 71 of 122

```
         ATAAATTATTTTTAGTGCAACATATAACGTCAATGTCAAAAATACGAAAGAGGCAGGTTG
         CATAGGGAGGCTGAGGAGGAGATGCTGAGATTCAGTGTGGAAGGTGACAAGATAAGAGGA
         GGAAAGTTTGCCCTGGCCCTGAGGCAGCAAAATTAATTTTGCCCCAGGCCTTTAACTGAG

24040    ATTTGGAAAGGTACTGCATTTTCTATGGCCCAAGAGGCCAAAACACAGACAAAGTGAGTA
         CAACATTTGGTCTGGCAGATTTTGACTCCACACGACAGAGCCCATTCTAAGTGTGTGGAC
         TGGCTAGCAGTGGCGAGGGTTCCCTTTCTCTAGTCTGCAAACCTCCCAATCAACATGGCT
         GTTAGAAACCTGGTCCTTTTGCAGAATTGCTTTACCACTTCTACCTTGATGACCCAGTGC
         CTGTGATACCACCGTTAGAAAGTCATCTAATTGCGTTTAAACTTGTTCTCTCCAGCATCC
         [G,A]
         TTGAATAGCAAAGACAAATCCTTCTGACCATAGTTCTAATTCTGTGGGCTGGCACTATGG
         ATTTAATTGTGCCCTCCCAAAATCCGTTTGTTAAAGCCCTAACCTCCAGCATGATGGTAG
         TGGGTTTAGCTGTCGTCATGAGGATGTCATCCTCATAATGGATTAATACTCTATAAGAGA
         CACCAGAATACTTGCTCTTTCTCTTTTTCTGTGCACATGCACCAAAGTAAGGTCATGAGA
         ACACACAGCAAGATGGCGGCCATTGGCAAGTCAGGAAGAGAACCTCACCATAGTGGCACC

24536    TCTTTCTCTTTTTCTGTGCACATGCACCAAAGTAAGGTCATGAGAACACACAGCAAGATG
         GCGGCCATTGGCAAGTCAGGAAGAGAACCTCACCATAGTGGCACCATGATCTCGCACTTC
         CAGTTTCCAGAACTGTGAAAAAAGAAATTTTTGTTGTTTAAGTCACCATTCCATAGTATT
         TGGTTATGGCATCCTGAGCTGACTAACACCACTGGTAATTAAGGTGTTTCTTCCATGAAA
         AATGAAATGATGGTCAATAGGAAGCAAACAGAAGCTTAAGCAGAAGGGCAGAAAGGAGTG
         [C,A]
         ATTTGGGAACCAGAGGGAGTCCTATAGAGACTAGACCTGGGATTTTGACAGTTCTGCTGA
         GGGCTGGCCCTGTGCCCAGCCTCCTTCCACTTCTCTTCATCTCACTAGACCAAGAAAATA
         TGCACATCTGTTATCCACAAATACTCTGAATTCCCCCGCCAACGCAGATCCCCGGGAAAA
         CCTAACACAAGCAGAACAGTGGAGGAGATGCACGGGGTATTTGGTGTTTCTCAGGAAAAA
         GGCTTGATTTTTTGACACCCTCTATCTTGGTCTCTTAATTTGTCCTGAGTCAGTGAGCCA

25125    GTCAGTGAGCCACAGTGAAGTCCAGAGAAAAAAATGGAAATAGGAGAATCGGGCTTAAAC
         CTCAGTTTTGTCGCTGATTAACCTGTGATCTTGGGCAACCCACTGATCTGTTCTTTGTTT
         CAGTTTCCCTCCATGACCCTGAGTACTTTAATAGCCTCTATTCTCCCATGTATCTCTGTT
         GAACAGATCATAAAGAGTAGTGATTATGAATCCAGACTTTACTGTTACTGTCAAATATCA
         CATTAATTTCCTCAGCCACTTTACACCTGTGCAACCTGAGGCAAAATTTTGTAATATCTC
         [-,A,T]
         GTTTCAGTTTTTATAGCTGTCAAATGGGGTTAATAACAATCCCTATCACAAGCAGTCTTT
         ACAGGCATGGAATGAAAAATTGCTTGTGAAATGCTGAGTGTAAGGCCTATTATATTCAGT
         AACTATTACCTCTATTTTGGTTCAACACCATTTTGCAGTCTCCCCCAAACACCCTGCTGC
         AACACACCTCTAAGCCTTGGCTATGCTGGCCTAAAAAAACTTCTAGACACCCTTGATGACC
         CAAATGAAAATCTTCTGAACCCAAGGAATGCTTTCCTGGCTGTGTAGGTGGCAAGCATCA

25167    GGAGAATCGGGCTTAAACCTCAGTTTTGTCGCTGATTAACCTGTGATCTTGGGCAACCCA
         CTGATCTGTTCTTTGTTTCAGTTTCCCTCCATGACCCTGAGTACTTTAATAGCCTCTATT
         CTCCCATGTATCTCTGTTGAACAGATCATAAAGAGTAGTGATTATGAATCCAGACTTTAC
         TGTTACTGTCAAATATCACATTAATTTCCTCAGCCACTTTACACCTGTGCAACCTGAGGC
         AAAATTTTGTAATATCTCTGTTTCAGTTTTTATAGCTGTCAAATGGGGTTAATAACAATC
         [C,T]
         CTATCACAAGCAGTCTTTACAGGCATGGAATGAAAAATTGCTTGTGAAATGCTGAGTGTA
         AGGCCTATTATATTCAGTAACTATTACCTCTATTTTGGTTCAACACCATTTTGCAGTCTC
         CCCCAAACACCCTGCTGCAACACACCTCTAAGCCTTGGCTATGCTGGCCTAAAAAAACTTC
         TAGACACCCTTGATGACCCAAATGAAAATCTTCTGAACCCAAGGAATGCTTTCCTGGCTG
         TGTAGGTGGCAAGCATCACACTCTCAAGGGAGTAAAACTGTGCCTTTCTGCAACCATTAT

25623    TGGCTATGCTGGCCTAAAAAAACTTCTAGACACCCTTGATGACCCAAATGAAAATCTTCTG
         AACCCAAGGAATGCTTTCCTGGCTGTGTAGGTGGCAAGCATCACACTCTCAAGGGAGTAA
         AACTGTGCCTTTCTGCAACCATTATTGCCCATAACCCATCATGTTGTGATGCGTTTTTTA
         CAAGATTGTCTTTGTTGTCTATGCTTTTGGGGTTATATGCAAGAAATCATTATCCAGAC
         CAATGTCACATGGTTTTTCCCCTATGTTTTTCTCCAGTCGTTTTACAATTTCAGGACTTA
         [T,C]
         ATTTAAGTATTTAATTCATTTTGAGTTGATTCTTGTGTAAGGGATGAGAAAACGGTCCAA
         TTCAATTCTTCTGCATGTGAATAGCCAGCTTTTCCGGCACCATTTATTGAAGAGACTATC
         CTTTTCCCCTTGTGTGCTCTTGGCACCPTTGTAGAAAATCAGTTGATCATAGACTTGTAG
         GTTTATTTCTCAGCTGTCTATCCTATTCCATTGGTCTACATATCTGCTTTTATGCTAGTA
         CCATGCTGTTTTGATTAGTATAGCTTTGCAATATATTTTGAAATCAGATCATGTGATGCC

27143    CAACAAAGTGACTGTAGTTAATAATATATTATGTATTTCAAAATTTCTAAAAGACTGGAT
         TTTAAATGTTCTCACCACAAAGAAATGACAAGTATGTGAGGTTATGAATACGTTAATTAG
         CCTGATTTGTTCATGCCACAATGTATATGTCTATCAAAAGATCACACTGTAACACAGAAA
         TAGATATTATTTGTCAATTAAAAACAAATTTTTTAAAAAGGCTATTTTTCTTGCTGAATC
         CCACATGTCTCTGGGGCTAGGGTAGATGTCTTTTTTAACCAGATTGTGTCCAGCTTAGTC
         [C,T]
         GGTGTTCAATAAGCATTAAGTGTCTGAAGGGGTGGTCAATGGACAAACAGATGAAGGGTTG
```

FIGURE 3, page 72 of 122

```
          CATAGATTAATAGAAGTCTACCATATCTAGGCTGGGAGTGGTGGCTCACACCTGTAATCC
          CAGCACTTTGGGAGGCCAAGGTGGGCGGATCATGAGGTCAGGAGATTGAGACCATCCTGG
          CTAACACGGTGAAACCCTGTCTCTACTAAAAATACAAAAAATCAGCCTGACGTGGTGGCG
          GGCGCCTGTAATCCCAGCTGCTCAGAAGGCTAAGGCAGGAGAATCACTTGAACCTGGGAG

27211     TTCTCACCACAAAGAAATGACAAGTATGTGAGGTTATGAATACGTTAATTAGCCTGATTT
          GTTCATGCCACAATGTATATGTCTATCAAAAGATCACACTGTAACACAGAAATAGATATT
          ATTTGTCAATTAAAAACAAATTTTTTAAAAAGGCTATTTTTCTTGCTGAATCCCACATGT
          CTCTGGGGCTAGGGTAGATGTCTTTTTTAACCAGATTGTGTCCAGCTTAGTCCGGTGTTC
          AATAAGCATTAAGTGTCTGAAGGGTGGTCAATGGACAAACAGATGAAGGGTTGCATAGAT
          [T,G]
          AATAGAAGTCTACCATATCTAGGCTGGGAGTGGTGGCTCACACCTGTAATCCCAGCACTT
          TGGGAGGCCAAGGTGGGCGGATCATGAGGTCAGGAGATTGAGACCATCCTGGCTAACACG
          GTGAAACCCTGTCTCTACTAAAAATACAAAAAATCAGCCTGACGTGGTGGCGGGCGCCTG
          TAATCCCAGCTGCTCAGAAGGCTAAGGCAGGAGAATCACTTGAACCTGGGAGGCAGAGAT
          TTCAGTGAGCCAAGATCACACCACTGCACTCCAGCCTGGGCAACCGAGTGAGACTCTGTC

27383     CCACATGTCTCTGGGGCTAGGGTAGATGTCTTTTTTAACCAGATTGTGTCCAGCTTAGTC
          CGGTGTTCAATAAGCATTAAGTGTCTGAAGGGTGGTCAATGGACAAACAGATGAAGGGTT
          GCATAGATTAATAGAAGTCTACCATATCTAGGCTGGGAGTGGTGGCTCACACCTGTAATC
          CCAGCACTTTGGGAGGCCAAGGTGGGCGGATCATGAGGTCAGGAGATTGAGACCATCCTG
          GCTAACACGGTGAAACCCTGTCTCTACTAAAAATACAAAAAATCAGCCTGACGTGGTGGC
          [G,A]
          GGCGCCTGTAATCCCAGCTGCTCAGAAGGCTAAGGCAGGAGAATCACTTGAACCTGGGAG
          GCAGAGATTTCAGTGAGCCAAGATCACACCACTGCACTCCAGCCTGGGCAACCGAGTGAG
          ACTCTGTCTCAAAAAAATAAAAATAAGAAATCTACCATATCTACTTCTCAGGCATAAATA
          TGATAACTATTTCCTTTAATTTCCCATTGGATAAATAACTGTTTATAAACATCTAGTTGC
          CAGACCCATGCTTGGAGTCTCAGGGCTAAAAGAAATGCTCCCCATTTGCTCTATGTGCTA

27553     ACCTGTAATCCCAGCACTTTGGGAGGCCAAGGTGGGCGGATCATGAGGTCAGGAGATTGA
          GACCATCCTGGCTAACACGGTGAAACCCTGTCTCTACTAAAAATACAAAAAATCAGCCTG
          ACGTGGTGGCGGGCGCCTGTAATCCCAGCTGCTCAGAAGGCTAAGGCAGGAGAATCACTT
          GAACCTGGGAGGCAGAGATTTCAGTGAGCCAAGATCACACCACTGCACTCCAGCCTGGGC
          AACCGAGTGAGACTCTGTCTCAAAAAAATAAAAATAAGAAATCTACCATATCTACTTCTC
          [A,T]
          GGCATAAATATGATAACTATTTCCTTTAATTTCCCATTGGATAAATAACTGTTTATAAAC
          ATCTAGTTGCCAGACCCATGCTTGGAGTCTCAGGGCTAAAAGAAATGCTCCCCATTTGCT
          CTATGTGCTAGTCACATCAATCCCACTTGATCCCCACAGCACCCTTTGGGGGAAAGAGAG
          TAGTTGATAATCTGATTTTACCAATGAACAAAGGCTCAGAAAAGACTAGTTGATCCTAAA
          AACACCACACAGCATTCTAATGTTGTAAAAATACCTGGATTTGAGTCCCCTGTACACTGA

29141     AAGTAGCTGTGGCAGCTCCTTATAAAGAGATCACAGCTGGAGATGCGTTCACTAATCCCA
          CAGAATAATCCTCTGTTTCTCTTTCCTGAACCCCCACATCTAGTTCATCAGCAAGTCTGT
          CAGTGCTAGTTACAAAATATATTTTGAATCCACACACTTTTTTCAAAAAAAATCTCTACC
          ATAACCCCGTATCCCTCACACTGTGATCTTTTTCCCATATCACTACATTAACCTCCTAAC
          CTGTCTTCTTGCCTCCTTCCAGACAATGTTCCACCTGGAGGCTAAAGTGACTTTTTAAAC
          [C,G]
          TATTGAGCTGAACATTCCATTCCTCTGCTTAAGTAAATGTAGACTCCCTTCCTTGGCCTA
          CAAGGCCCTCCATGAACCTGTCCCTCCCTAACCTTACCTCTTGCCCCTCTCTCATGTAAC
          TGGATTTCAGCCTTCCAGGCCTTCCTTCAGTTCCTTAAACAGGCCAAGCTGCCAGGGCCT
          TTGCACTGGCTGTTCCCTTTGCCTGGGATGCCGTTAAATCTCATCATGGCTGGCTCTAGT
          TCACTATTCAGGTCCCAATTCCCACGTTACTTTCTCAGAGAGTGTTCCCTGAACACTTAA

30549     TGGCAGCCTGTTAGAAATGCCAGTTCAAGGCCAGGCACGGTGGCTTACGCCTGTAATCCC
          AGCACTTTGGGAGGCCGAGGTGGGCAGATCACAAGGTCAGGAGATCGAGACCATCCTGGC
          TAACACCGTGAAACCCCGTCTCTACCAAAAATACAAAAAATTAGCCGGGCATGATGGCAC
          GCACCTGTAGTCCAGCTCCTCAGGAGGCTGAGGCAGGAGAATCGCTGGAATCGGGAGGTG
          GCAGCTGCAGTGAGCCAAGATCACGCCACTGCACTCCAGCCTGGACGACAGAGCGAGACT
          [C,T]
          CATCTCAAAAAAAAAGGAAAGAAAAGAAATGCCAATTCGAGGGTCTCAGGCCGGACCTCC
          TGAATCAGAAACTTTGGAGTTGGGGCTCAGCACTCTGTTTTAACAGGCCCCGCAGATGAT
          TCTGAAGATGCTCACCAAAGTTTGACAACCACTACCTATTGAATGACTTAATTTTATGGG
          ATACTAGATCAGACTAGATCAGAGTCTGAAGTTTTTCTGTAACTCAGTTCTCATCTTAAC
          GCTGTGAGTGTAGATTGCTCTCAATCCACGGCTGAAGAAGCCAGATTGTGACTGAATAAA

30984     CCAAAGTTTGACAACCACTACCTATTGAATGACTTAATTTTATGGGATACTAGATCAGAC
          TAGATCAGAGTCTGAAGTTTTTCTGTAACTCAGTTCTCATCTTAACGCTGTGAGTGTAGA
          TTGCTCTCAATCCACGGCTGAAGAAGCCAGATTGTGACTGAATAAAGCCAGTTACCCTGC
          CTGACCCTGGCTCCAGGACCTGCAGCATGTAAAACATCATCCAGGAGTGCAGCCCCTGTG
          AAGACAGCTGACCTGAAGGGCATGGAGTCTGTGACCCCATCCACCTTGAGAAGCATGCTT
          [C,T]
```

```
           AACCAGCAAAGGAAAGACAGTCCTAGACAAGGAAACATCATCAAGTCTCTCTGTAGGAAT
           ACTTCATATCAGACCATATTGCCATGTGTTGAAGATTATTATATAATGATAATAATTAGT
           ACAATAGTAATACCATACATTTTGATTACATTTTTGACATTTTCAAGGCATGTTTATATT
           CTAATAATCTATTTTCCCTCTTGATAATTTTATTTTCTCCCTTAAAAATCTCTCCAGTTA
           CACAAAGTAGAGTAGGAGTGAAAGGATTGTTAATCTGTTAATCTGCCTGTCCAGGGGAGA

    31266  ACCTTGAGAAGCATGCTTCAACCAGCAAAGGAAAGACAGTCCTAGACAAGGAAACATCAT
           CAAGTCTCTCTGTAGGAATACTTCATATCAGACCATATTGCCATGTGTTGAAGATTATTA
           TATAATGATAATAATTAGTACAATAGTAATACCATACATTTTGATTACATTTTTGACATT
           TTCAAGGCATGTTTATATTCTAATAATCTATTTTCCCTCTTGATAATTTTATTTTCTCCC
           TTAAAAATCTCTCCAGTTACACAAAGTAGAGTAGGAGTGAAAGGATTGTTAATCTGTTAA
           [A,T]
           CTGCCTGTCCAGGGGAGAGGCAAAGTAAAGAGATGTATCTGTGATTTCATGGCCTGTTAG
           GTTCGTAGTAACAATAGCTAATGTGTGTTAGGGAGCTTAAGTGGGCCAGGCTCTTTGCTA
           GATATGTCAGTGCTTATTAATTTAATAAAACCTCTAGATCCAAGGCTTCCAGACTCCCAA
           CTGGTCTCCTTCAGCAAGCAGCGTTTCTTTTCTTTCACCTCACTCTGAATTCTTCAGACT
           CTCTAGTCATTCATTTATTTTATTCATTCAACTTTTATTTAGCTTATACATCCTACAGAG

    31425  TTTGATTACATTTTTGACATTTTCAAGGCATGTTTATATTCTAATAATCTATTTTCCCTC
           TTGATAATTTTATTTTCTCCCTTAAAAATCTCTCCAGTTACACAAAGTAGAGTAGGAGTG
           AAAGGATTGTTAATCTGTTAATCTGCCTGTCCAGGGGAGAGGCAAAGTAAAGAGATGTAT
           CTGTGATTTCATGGCCTGTTAGGTTCGTAGTAACAATAGCTAATGTGTGTTAGGGAGCTT
           AAGTGGGCCAGGCTCTTTGCTAGATATGTCAGTGCTTATTAATTTAATAAAACCTCTAGA
           [T,C]
           CCAAGGCTTCCAGACTCCCAACTGGTCTCCTTCAGCAAGCAGCGTTTCTTTTCTTTCACC
           TCACTCTGAATTCTTCAGACTCTCTAGTCATTCATTTATTTTATTCATTCAACTTTTATT
           TAGCTTATACATCCTACAGAGAAGGTGAAGGGCACAGAGGTGAATGTGCTGGCCCACAAA
           TTGCTAGCTCTCTCAGGGGAATCCAGAACAATGCAGTGCCACCCACAGTGGAGCCTTGAA
           GGACAAAGGCAAATTATTTACCAAATCAAAAGTTGCCAGATTCAAGATTCTCTGCAGTTC

    32198  GAAGGAATAAAAGACAGAAGACTTCCTAGATCTAGTGCTAGAGGCTCCATAGTTCTGTTC
           CTTACAAATGCTGTAACTTTGGGCCAGCCTCCCAACCTATTCAACCTTCTGCTTCCTTCT
           CCATGAAATAAGAACCTGGATTTCTTACTCACCTGATTCACAGGGAACCTCTGAAAATCA
           AACGTAAGAATTAGTAATAGTAATAATAACAATATAAATAGCTAACATCTATTGAGCAAT
           TATATTTCTTACTTTCACTGGCTTATTTCATTTAATCATGAAAGCATTTCCATGAAGCAG
           [A,G]
           TAATGTTTTAGGCCCCAGTTTATAGATTATAAAAACAGAGGTTTAGTAAATTACTAAGTT
           CACCCACCCTTAACAAGCAGTGGAACAAGGATTTGAATTCAGATCTGTCTGATCTTTGAA
           CCTATTACTATTAAATCACTACCCCAGAATTCAAAAACAAATGAGGAAAACTCTGCGAGT
           CATGCTGATGAAATGAGCGGAATCAAAAGAGGGAACAAAAGTGAGGGCCTGGGGTCAGAG
           GCTGTTAGCTTGGCATGAAGGATGGAAAGCATTTCCAGATACCATGTCCTGAGTGAGCAC

    33129  CTCAGTCTTGCTGCCTTCCCTTGAGTCTGGACAGAACCATCCTCGGTGGTGAGCTTCCCA
           GAGCCTTTTGGGAGTGGCTCAGGGGACCAATTTGCTTCCTTGAAGAATTTTGAATAGCTT
           CAGATGTAGCTCTGGTGGTTGAAGCTAAGGACAATAATGAAAATAATATGATAGCTGACA
           TTCATTGAACTCTAATCAGGGGCTTGTTTTAAGGCATATTTTAGGCTCTATGCACTGTTG
           TGTGTCTTGCTGCTCTCATTACACCAAAGATATTATAGCACACCCACATCTCACATTGAA
           [T,C]
           CTGATTTATGTGTGAGTTGAGTGGCATTGCTGCACACTAGTTGGTGCAATGACATGTTTT
           ATAGATATTTAAATATTTATTAATTTGATTTTACAGTTTGCTTTTAATATTTCAGAGTCA
           ATATATTTATTTTTCTGGTCAGACATACTTTTTAGGCCCACCCTTCAAAAGACTGTAGGA
           CCCAGACACTGAGTTTTCTCATGCCACCTGGAGAAAGTGATCCTGTAATTATTGTGTTGG
           GAGCTGAGTGCTCCCACACATTGCCTGTGGATAAGTGTAAGACTCTGGAATTAAACTGCC

    33292  TAATATGATAGCTGACATTCATTGAACTCTAATCAGGGGCTTGTTTTAAGGCATATTTTA
           GGCTCTATGCACTGTTGTGTGTCTTGCTGCTCTCATTACACCAAAGATATTATAGCACAC
           CCACATCTCACATTGAATCTGATTTATGTGTGAGTTGAGTGGCATTGCTGCACACTAGTT
           GGTGCAATGACATGTTTTATAGATATTTAAATATTTATTAATTTGATTTTACAGTTTGCT
           TTTAATATTTCAGAGTCAATATATTTATTTTTCTGGTCAGACATACTTTTTAGGCCCACC
           [G,C]
           TTCAAAAGACTGTAGGACCCAGACACTGAGTTTTCTCATGCCACCTGGAGAAAGTGATCC
           TGTAATTATTGTGTTGGGAGCTGAGTGCTCCCACACATTGCCTGTGGATAAGTGTAAGAC
           TCTGGAATTAAACTGCCTTAGGTTTGAATCCTGAACCCACTACTTTCTAGCTGTGTAATC
           TTTGGCAAGTGCCATATCCTATTTGTGCCTCAGTTTTCTCATTTGCAAGATGGTTATTGT
           AAGGACTGAATCAGAGAACACATAAACAGTTTAAAATACTACCTGTAACCTGTATCATGG

    34124  ATGAGTTTATTTCTTGGTCATGCTGCAAGTCCAACACAAAATGGTGGGGGAGTGGGGAGA
           GGCATTGCTCCTCATGCTTCCTTAGGGACCCAAGCTGAAAGAGGGACCATCCTAACATGA
           TCACAGTGTCAAAGGAACTTATGTAATAAGCCACACCCTGGCTCTAAAGCCTTATTCCCA
           AGGTCACGGACATCATTTCCACACACAGTTCATTGGATCAAGCAAGTTGATGGCCAGGCT
           TAACTTTAAAGGAGGTAGAAAAGTGAAATCTTACCATGTAACTGCAAAATTGGGAATAGC
```

FIGURE 3, page 74 of 122

```
                    [C,T]
                    AAATGTTATCTCAGAGGAAGGTTTTGAGGATCAAATTAATTAATCTATGAAATTATCAAA
                    AATAGGGCCTAGAACATAGAAAAATCTTCTTTAATGTTAGGTATGAATTCTTATTAATTA
                    ATGAATTGCCTCTTGTAGCAGCTCTCCTGTATAAATATCTTCCACCTGATTCTCTTGTTC
                    CTGATATCTCTCTCTCTCTCTCTCTCTCTCTCAATGATCCATCTTGCAGACCTG
                    ATCCATTTTATTATTAGACCTCTCTCTTATCATGTCATCTCTCTTGTTCTCCCTTGTCTG

        34668       CATTTTATTATTAGACCTCTCTCTTATCATGTCATCTCTCTTGTTCTCCCTTGTCTGATT
                    GGGTAAGTTCAGAGTCCTAAGCAAGATATCTGAGGGCAATCCGTAATTCACTTCTAACCT
                    ACTCTGGAATTTTTTCTCCCACTTTTCTCTAAGGCTGTGTTCTAACTGGAAGGACTCATT
                    CACTGTTCCCAAATTAGACTGGCACATTCCTACCCCATCCCTTGATATTCTTCATTCTTA
                    TTGTATAATCTCCCTTCTCAAATGCCTCTTGCCTTTCTGCAATTTTATATCCCTCATTAT
                    [A,G]
                    CAGTTTACCACTTCCTCCAAGAAGCCTCATTTTTCACCACAGCCTGAAATGATTTCATTC
                    AGGGCTGAACTTCCACAGTACTACTCATTTGGCTGAACTTTACTACTCATTTGACCCTGA
                    ACTCAGACTGCTTTGAACATTTTTTTTTTTATTTATGCTTATGTTGTTACTGTTGTGGAA
                    AGAACACAGAGCACAGCATCAGACTCATATTGATCTAAATTTCAGGTCTGTCATTGACTG
                    GCCTTGACACCCTGTGCAGGTCAGCCATGTTCTCGAGCTCCTTGCCCCTTTCCTGTGACA

        34807       CACTTTTCTCTAAGGCTGTGTTCTAACTGGAAGGACTCATTCACTGTTCCCAAATTAGAC
                    TGGCACATTCCTACCCCATCCCTTGATATTCTTCATTCTTATTGTATAATCTCCCTTCTC
                    AAATGCCTCTTGCCTTTCTGCAATTTTATATCCCTCATTATGCAGTTTACCACTTCCTCC
                    AAGAAGCCTCATTTTTCACCACAGCCTGAAATGATTTCATTCAGGGCTGAACTTCCACAG
                    TACTACTCATTTGGCTGAACTTTACTACTCATTTGACCCTGAACTCAGACTGCTTTGAAC
                    [A,T]
                    TTTTTTTTTTTATTTATGCTTATGTTGTTACTGTTGTGGAAAGAACACAGAGCACAGCAT
                    CAGACTCATATTGATCTAAATTTCAGGTCTGTCATTGACTGGCCTTGACACCCTGTGCAG
                    GTCAGCCATGTTCTCGAGCTCCTTGCCCCTTTCCTGTGACATGAAAGTGATTATACCTAT
                    TTCATAAGAATGCTGCGAGGATAGAATTGAAAACAAGTTATAGTGACCTACATATAGGAG
                    ATGACTGTCCTCATCATAGCTGTGTCCCTAGTATCAAGAACAGTACCTGGCAAATAATAG

        36025       GAAGAGCTCCTCTTGACTGGATACAAATCTTTTCCTGGTAGGGCTTTGTAAGACAACTCA
                    TCTATAAGGATGAATAAACTTTCTATCCTTCTGGACTAGCTTTCCTGCATAGCTAACTCA
                    TTTAATTCCAGGCTAGATCACTTCTAAAAAATCAATGCATTAGAATTGAATTAATTTGTG
                    TTCACTTAATTGATATAGTGTGTGCTTTTCTAAATGGCACTAGGTTTGAAAGTGAAGCTG
                    GTCACACTTTTTTACAGTAGGCTTCTCTAATAACACTTGATTCTGTCTTTGTACCCAGTG
                    [C,T]
                    CTTCTGTATAGTATTAGCTCAGGGATTTGTACGTTGTTGGCCAACAAACTTTGTTGATGC
                    ATTGAAAAATACAGTTTCCTAATTGCAACTCCAGTGAACCTGTAATATAGTAAGATCCTA
                    CAGGTCTCTGTAGGAAATATTGCTACTGAAAGTCAAAGATCACTCATTAAGTCCATCTCA
                    TAGTTGATTGTAGTCCAGTGGAAATATTTGCTATATTTGGCAGAACTGTCTTTGTATAAA
                    TAGTGAACAGATACATTCCATCTTAGCACTGCCAGCTTAGGATCTCTTAAGGATTCGACT

        36058       CCTGGTAGGGCTTTGTAAGACAACTCATCTATAAGGATGAATAAACTTTCTATCCTTCTG
                    GACTAGCTTTCCTGCATAGCTAACTCATTTAATTCCAGGCTAGATCACTTCTAAAAAATC
                    AATGCATTAGAATTGAATTAATTTGTGTTCACTTAATTGATATAGTGTGTGCTTTTCTAA
                    ATGGCACTAGGTTTGAAAGTGAAGCTGGTCACACTTTTTTACAGTAGGCTTCTCTAATAA
                    CACTTGATTCTGTCTTTGTACCCAGTGTCTTCTGTATAGTATTAGCTCAGGGATTTGTAC
                    [C,G]
                    TTGTTGGCCAACAAACTTTGTTGATGCATTGAAAAATACAGTTTCCTAATTGCAACTCCA
                    GTGAACCTGTAATATAGTAAGATCCTACAGGTCTCTGTAGGAAATATTGCTACTGAAAGT
                    CAAAGATCACTCATTAAGTCCATCTCATAGTTGATTGTAGTCCAGTGGAAATATTTGCTA
                    TATTTGGCAGAACTGTCTTTGTATAAATAGTGAACAGATACATTCCATCTTAGCACTGCC
                    AGCTTAGGATCTCTTAAGGATTCGACTATTTACTTAACTGAGGTACAGCCCATGGGACAC

        36061       GGTAGGGCTTTGTAAGACAACTCATCTATAAGGATGAATAAACTTTCTATCCTTCTGGAC
                    TAGCTTTCCTGCATAGCTAACTCATTTAATTCCAGGCTAGATCACTTCTAAAAAATCAAT
                    GCATTAGAATTGAATTAATTTGTGTTCACTTAATTGATATAGTGTGTGCTTTTCTAAATG
                    GCACTAGGTTTGAAAGTGAAGCTGGTCACACTTTTTTACAGTAGGCTTCTCTAATAACAC
                    TTGATTCTGTCTTTGTACCCAGTGTCTTCTGTATAGTATTAGCTCAGGGATTTGTACGTT
                    [G,C]
                    TTGGCCAACAAACTTTGTTGATGCATTGAAAAATACAGTTTCCTAATTGCAACTCCAGTG
                    AACCTGTAATATAGTAAGATCCTACAGGTCTCTGTAGGAAATATTGCTACTGAAAGTCAA
                    AGATCACTCATTAAGTCCATCTCATAGTTGATTGTAGTCCAGTGGAAATATTTGCTATAT
                    TTGGCAGAACTGTCTTTGTATAAATAGTGAACAGATACATTCCATCTTAGCACTGCCAGC
                    TTAGGATCTCTTAAGGATTCGACTATTTACTTAACTGAGGTACAGCCCATGGGACACACA

        36418       AGTGAACCTGTAATATAGTAAGATCCTACAGGTCTCTGTAGGAAATATTGCTACTGAAAG
                    TCAAAGATCACTCATTAAGTCCATCTCATAGTTGATTGTAGTCCAGTGGAAATATTTGCT
                    ATATTTGGCAGAACTGTCTTTGTATAAATAGTGAACAGATACATTCCATCTTAGCACTGC
                    CAGCTTAGGATCTCTTAAGGATTCGACTATTTACTTAACTGAGGTACAGCCCATGGGACA
```

```
         CACATCACCTATTGAATTCCAGGTCTTAGCAGTTTATTAGAAGTGTAAACAATGCTTCCA
         [C,T]
         TCAAAAAAGTCAACTCATCCAATTGTTAAGACGATTTATCTTTTTTCTTTCATTTCAGCC
         TAGTGCAGTGATTCTCAGCTGGGAGTGATTTTGCCCCTTTCCCTTCCTGGGGGACATGTG
         GCAATGTCTGGAGACACTTTTAAGTGTCACAACTCAGGACTGGAGAACTACTATTGACAT
         TTAGGTAAAAGCAATGGATGTGCTAACCATCCTGTAATGCACAGAACAAACCCCTACAAC
         AAATAATTATCTGGGCTAAAATGTCAATAATGCTGAGGTTAAGAAACCTCATTCTATTTT

36743    GTTAAGACGATTTATCTTTTTTCTTTCATTTCAGCCTAGTGCAGTGATTCTCAGCTGGGA
         GTGATTTTGCCCCTTTCCCTTCCTGGGGGACATGTGGCAATGTCTGGAGACACTTTTAAG
         TGTCACAACTCAGGACTGGAGAACTACTATTGACATTTAGGTAAAAGCAATGGATGTGCT
         AACCATCCTGTAATGCACAGAACAAACCCCTACAACAAATAATTATCTGGGCTAAAATGT
         CAATAATGCTGAGGTTAAGAAACCTCATTCTATTTTTTGTACTCATTAACTATCCCCCTC
         [A,G]
         AAACATCTCATGTACCCCATAAATATATATACCTACTATGTACCACAAAATTAAAAATAA
         AAAAGAGTATAAAATTAAAAAAAAAAAACCACCTAGTCTAGTTCTTTTTTTGGCCAAGTGC
         TGGGCACTGGTTCCCTCTGCTATTTCATTGTGTGGAACCTGGATGGGCTACTCAGAGTGT
         TCCTTGTTCAGAATCAACTTCAGCTGGCTTACTCTTAGTGGGAAGGCAAAACTTGGGAGA
         TAAGGGTCATCTCAATTTCTCCTTTCTTTAAGCACTAGTGGTTAGCCCTGTAGCTGGAAT

36958    CAAATAATTATCTGGGCTAAAATGTCAATAATGCTGAGGTTAAGAAACCTCATTCTATTT
         TTTGTACTCATTAACTATCCCCCTCAAAACATCTCATGTACCCCATAAATATATATACCT
         ACTATGTACCACAAAATTAAAAATAAAAAAGAGTATAAAATTAAAAAAAAAAAACCACCTA
         GTCTAGTTCTTTTTTTGGCCAAGTGCTGGGCACTGGTTCCCTCTGCTATTTCATTGTGTG
         GAACCTGGATGGGCTACTCAGAGTGTTCCTTGTTCAGAATCAACTTCAGCTGGCTTACTC
         [T,C]
         TAGTGGGAAGGCAAAACTTGGGAGATAAGGGTCATCTCAATTTCTCCTTTCTTTAAGCAC
         TAGTGGTTAGCCCTGTAGCTGGAATACAAACCACAACCCTCTCTCCTGATTCACTATAAG
         AACCTGGCTTGGACTTCTCAAGATAGTTTTCCCTCCTCATTTCCCTGGCTTGGTTGGAAC
         ACACTCCACTCAGTAAGTTGGAGAGTCTCTGTGGGTATACAACTGGCACTTTGATTGCCG
         CAACTTTGTTATCTGTGATCATGGTATATAATAATCAGGATGAAAGTCAAGTTTCCTATT

37577    ACTCAACACTGTAAAAGAAAACTACTCCTGTGGAAATTAAACAGAGTCATTTTCTTGTGG
         TGAAAAGGTCCTGGGTTTGCCTCAGTGGGTCTAGATTTCAGCCTTGGCTACTAAACTTGC
         TCATGGGCCTCTGTTTCTTTATCTGTATGATGGGAATAATAATTTCTGCCCTGATTACAT
         TAATGATGGAGAGGATCTATAAGATGGCTCCTAAGTTCTGTAAAATGTACCGCAGTTGCT
         CCCCAAAAGTGAAACTTGGGATTGGGAAAACTTCTACACAATCCCAGTCTATGAATTAAC
         [G,A]
         CTTAGGAATCACTGCATTATTATTTGAAGAAGTATATTTATAACTGCAGCATATCAGCAA
         AATGAGGCCAATATAGTAAAGCAAAATGTATATTTTAAAGGACTCATATTCTAAGCTTAT
         ACTCTTTTTTTGTTCAAATACCTTTTCTATTATGCAATGTTATGGTGATAGATTGCAGAA
         TGTTTGGTTGTGTTTTAAAACAACTTACATGAAAATATCAAACATTAACAACCTGTATCA
         GTCCCAGAAATGTCTTTAAATATTTTTCTGATCTTTGAAACTGAATCCAAAGGAACTCTG

38464    CTAAATTTTAAGAGCCTCAGTTCTTCATCTGCAAAAATGGAAATAGTAATACTACCCCA
         CAGGGTTGTTTGTGTGACTAAGTGAGCCAATATAGGGAAGAGGCTAGATAGAGAGACTAG
         CACTTGGTGGGTGCTCAGGGTTGTTTGTTTCATTCATTTAAATTATTTCCAGTATCCCCT
         AGTGTGTAAATAGTGAATCTGTGACATGGAGGCTCTTCCAAATTTAATCCAGTGCCATAT
         GCCTTCGTGATGCTGATCATAATCTTGAGAACACAATCCTGAACTCCGCAATCTTGAATA
         [C,T]
         TGAAATCGCAAAAATTCAAAATCCCTAAAGTCTAAAATTTCCAATAGCTAAATTCCTGAA
         AAACACAATTTTGAAAGATTAAAATTGCAAATCTTGAAATCTTGCAAATCAAATCCTGGG
         GAAGGGATTAGTGTATTTTTGGTTGTACACAGGATAGGTGCATCGTGTTAGTTACATCAT
         ATTAGGCAGAACTCTTATCCTGTTATTGTCTTCATTTGGAAATTAATTATGGTTTAAGGA
         GATGCATATTGGAGCTGACAAGGGGCAGACATGTGGGCTTAATTTTAGGTGTACACTTGA

38472    TAAGAGCCTCAGTTTCTTCATCTGCAAAAATGGAAATAGTAATACTACCCCACAGGGTTG
         TTTGTGTGACTAAGTGAGCCAATATAGGGAAGAGGCTAGATAGAGAGACTAGCACTTGGT
         GGGTGCTCAGGGTTGTTTGTTTCATTCATTTAAATTATTTCCAGTATCCCCTAGTGTGTA
         AATAGTGAATCTGTGACATGGAGGCTCTTCCAAATTTAATCCAGTGCCATATGCCTTCGT
         GATGCTGATCATAATCTTGAGAACACAATCCTGAACTCCGCAATCTTGAATACTGAAATC
         [C,G]
         CAAAAATTCAAAATCCCTAAAGTCTAAAATTTCCAATAGCTAAATTCCTGAAAAACACAA
         TTTTGAAAGATTAAAATTGCAAATCTTGAAATCTTGCAAATCAAATCCTGGGGAAGGGAT
         TAGTGTATTTTTGGTTGTACACAGGATAGGTGCATCGTGTTAGTTACATCATATTAGGCA
         GAACTCTTATCCTGTTATTGTCTTCATTTGGAAATTAATTATGGTTTAAGGAGATGCATA
         TTGGAGCTGACAAGGGGCAGACATGTGGGCTTAATTTTAGGTGTACACTTGACTGGATTA

38509    AGTAATACTACCCCACAGGGTTGTTTGTGTGACTAAGTGAGCCAATATAGGGAAGAGGCT
         AGATAGAGAGACTAGCACTTGGTGGGTGCTCAGGGTTGTTTGTTTCATTCATTTAAATTA
         TTTCCAGTATCCCCTAGTGTGTAAATAGTGAATCTGTGACATGGAGGCTCTTCCAAATTT
```

```
        AATCCAGTGCCATATGCCTTCGTGATGCTGATCATAATCTTGAGAACACAATCCTGAACT
        CCGCAATCTTGAATACTGAAATCGCAAAAATTCAAAATCCCTAAAGTCTAAAATTTCCAA
        [T,G]
        AGCTAAATTCCTGAAAAACACAATTTTGAAAGATTAAAATTGCAAATCTTGAAATCTTGC
        AAATCAAATCCTGGGGAAGGGATTAGTGTATTTTTGGTTGTACACAGGATAGGTGCATCG
        TGTTAGTTACATCATATTAGGCAGAACTCTTATCCTGTTATTGTCTTCATTTGGAAATTA
        ATTATGGTTTAAGGAGATGCATATTGGAGCTGACAGGGGCAGACATGTGGGCTTAATTT
        TAGGTGTACACTTGACTGGATTAAGGAATATCTAAAACCTGGTAAAACATTACTTTTGGT

38573   AGAGAGACTAGCACTTGGTGGGTGCTCAGGGTTGTTTGTTTCATTCATTTAAATTATTTC
        CAGTATCCCCTAGTGTGTAAATAGTGAATCTGTGACATGGAGGCTCTTCCAAATTTAATC
        CAGTGCCATATGCCTTCGTGATGCTGATCATAATCTTGAGAACACAATCCTGAACTCCGC
        AATCTTGAATACTGAAATCGCAAAAATTCAAAATCCCTAAAGTCTAAAATTTCCAATAGC
        TAAATTCCTGAAAAACACAATTTTGAAAGATTAAAATTGCAAATCTTGAAATCTTGCAAA
        [T,C]
        CAAATCCTGGGGAAGGGATTAGTGTATTTTTGGTTGTACACAGGATAGGTGCATCGTGTT
        AGTTACATCATATTAGGCAGAACTCTTATCCTGTTATTGTCTTCATTTGGAAATTAATTA
        TGGTTTAAGGAGATGCATATTGGAGCTGACAAGGGGCAGACATGTGGGCTTAATTTTAGG
        TGTACACTTGACTGGATTAAGGAATATCTAAAACCTGGTAAAACATTACTTTTGGTGTGT
        CTGTGAGTGTGTTTCCAGAGGAGTGTGTGACCTAAGTGGATTAGGCGGGGAAGATCTGCC

38624   AATTATTTCCAGTATCCCCTAGTGTGTAAATAGTGAATCTGTGACATGGAGGCTCTTCCA
        AATTTAATCCAGTGCCATATGCCTTCGTGATGCTGATCATAATCTTGAGAACACAATCCT
        GAACTCCGCAATCTTGAATACTGAAATCGCAAAAATTCAAAATCCCTAAAGTCTAAAATT
        TCCAATAGCTAAATTCCTGAAAAACACAATTTTGAAAGATTAAAATTGCAAATCTTGAAA
        TCTTGCAAATCAAATCCTGGGGAAGGGATTAGTGTATTTTTGGTTGTACACAGGATAGGT
        [G,A]
        CATCGTGTTAGTTACATCATATTAGGCAGAACTCTTATCCTGTTATTGTCTTCATTTGGA
        AATTAATTATGGTTTAAGGAGATGCATATTGGAGCTGACAAGGGGCAGACATGTGGGCTT
        AATTTTAGGTGTACACTTGACTGGATTAAGGAATATCTAAAACCTGGTAAAACATTACTT
        TTGGTGTGTCTGTGAGTGTGTGTTTCCAGAGGAGTGTGTGACCTAAGTGGATTAGGCGGGGA
        AGATCTGCCCTCAGTGGTGGCAGGCACCCTTCAATCAGCAGAGGGCACAGGAAGAACAAA

38802   TTTCCAATAGCTAAATTCCTGAAAAACACAATTTTGAAAGATTAAAATTGCAAATCTTGA
        AATCTTGCAAATCAAATCCTGGGGAAGGGATTAGTGTATTTTTGGTTGTACACAGGATAG
        GTGCATCGTGTTAGTTACATCATATTAGGCAGAACTCTTATCCTGTTATTGTCTTCATTT
        GGAAATTAATTATGGTTTAAGGAGATGCATATTGGAGCTGACAAGGGGCAGACATGTGGG
        CTTAATTTTAGGTGTACACTTGACTGGATTAAGGAATATCTAAAACCTGGTAAAACATTA
        [C,T]
        TTTTGGTGTGTCTGTGAGTGTGTGTTTCCAGAGGAGTGTGTGACCTAAGTGGATTAGGCGGGG
        GAAGATCTGCCCTCAGTGGTGGCAGGCACCCTTCAATCAGCAGAGGGCACAGGAAGAACA
        AATACAGAAGTCAAATTGGTCTCTCTGGCAGCTGGCTGGCTTTTCTTCTACTGCACTGGA
        CATCAGAAATATTCCAAAAAGTGTAGTTTCACAATGTTCACTTTCTCCATAAGCATCATG
        TGTGTACATGAAAACATGGAAACTTCCTTAATAAATGTAGAGATGTCTTTTTGTATATCT

38842   ATTAAAATTGCAAATCTTGAAATCTTGCAAATCAAATCCTGGGGAAGGGATTAGTGTATT
        TTTGGTTGTACACAGGATAGGTGCATCGTGTTAGTTACATCATATTAGGCAGAACTCTTA
        TCCTGTTATTGTCTTCATTTGGAAATTAATTATGGTTTAAGGAGATGCATATTGGAGCTG
        ACAAGGGGCAGACATGTGGGCTTAATTTTAGGTGTACACTTGACTGGATTAAGGAATATC
        TAAAACCTGGTAAAACATTACTTTTGGTGTGTCTGTGAGTGTGTGTTTCCAGAGGAGTGTGT
        [G,A]
        ACCTAAGTGGATTAGGCGGGGAAGATCTGCCCTCAGTGGTGGCAGGCACCCTTCAATCAG
        CAGAGGGCACAGGAAGAACAAATACAGAAGTCAAATTGGTCTCTCTGGCAGCTGGCTGGC
        TTTTCTTCTACTGCACTGGACATCAGAAATATTCCAAAAAGTGTAGTTTCACAATGTTCA
        CTTTCTCCATAAGCATCATGTGTGTACATGAAAACATGGAAACTTCCTTAATAAATGTAG
        AGATGTCTTTTTGTATATCTTCGTTGGTGAAATGGAACATTTCTTGAGATCTCAGTTCTG

39029   GCAGACATGTGGGCTTAATTTTAGGTGTACACTTGACTGGATTAAGGAATATCTAAAACC
        TGGTAAAACATTACTTTTGGTGTGTCTGTGAGTGTGTGTTTCCAGAGGAGTGTGTGACCTAA
        GTGGATTAGGCGGGGAAGATCTGCCCTCAGTGGTGGCAGGCACCCTTCAATCAGCAGAGG
        GCACAGGAAGAACAAATACAGAAGTCAAATTGGTCTCTCTGGCAGCTGGCTGGCTTTTCT
        TCTACTGCACTGGACATCAGAAATATTCCAAAAAGTGTAGTTTCACAATGTTCACTTTCT
        [C,G]
        CATAAGCATCATGTGTGTACATGAAAACATGGAAACTTCCTTAATAAATGTAGAGATGTC
        TTTTTGTATATCTTCGTTGGTGAAATGGAACATTTCTTGAGATCTCAGTTCTGTGAGCAA
        TTGCAAGTGTGGTGATGACCCATTGCAGTTCTTGATCAATTTCGTCAAAAGATTTAGGTT
        GTCCATCATGTATTTCAGATGATTGCAGTAGTAAAGCTTAGTGCACACAATTACCAACCA
        TAGTTATATACATTTGTAAATTTTACTTTTTGACTTATTACTTTATGAGTACAGTTCATT

39040   GGCTTAATTTTAGGTGTACACTTGACTGGATTAAGGAATATCTAAAACCTGGTAAAACAT
        TACTTTTGGTGTGTCTGTGAGTGTGTGTTTCCAGAGGAGTGTGTGACCTAAGTGGATTAGGC
```

FIGURE 3, page 77 of 122

```
            GGGGAAGATCTGCCCTCAGTGGTGGCAGGCACCCTTCAATCAGCAGAGGGCACAGGAAGA
            ACAAATACAGAAGTCAAATTGGTCTCTCTGGCAGCTGGCTGGCTTTTCTTCTACTGCACT
            GGACATCAGAAATATTCCAAAAAGTGTAGTTTCACAATGTTCACTTTCTCCATAAGCATC
            [A,G]
            TGTGTGTACATGAAAACATGGAAACTTCCTTAATAAATGTAGAGATGTCTTTTTGTATAT
            CTTCGTTGGTGAAATGGAACATTTCTTGAGATCTCAGTTCTGTGAGCAATTGCAAGTGTG
            GTGATGACCCATTGCAGTCTTGATCAATTTCGTCAAAAGATTTAGGTTGTCCATCATGT
            ATTTCAGATGATTGCAGTAGTAAAGCTTAGTGCACACAATTACCAACCATAGTTATATAC
            ATTTGTAAATTTTACTTTTTGACTTATTACTTTATGAGTACAGTTCATTTGCACATCTTT

   39179    TGGTGGCAGGCACCCTTCAATCAGCAGAGGGCACAGGAAGAACAAATACAGAAGTCAAAT
            TGGTCTCTCTGGCAGCTGGCTGGCTTTTCTTCTACTGCACTGGACATCAGAAATATTCCA
            AAAAGTGTAGTTTCACAATGTTCACTTTCTCCATAAGCATCATGTGTGTACATGAAAACA
            TGGAAACTTCCTTAATAAATGTAGAGATGTCTTTTTGTATATCTTCGTTGGTGAAATGGA
            ACATTTCTTGAGATCTCAGTTCTGTGAGCAATTGCAAGTGTGGTGATGACCCATTGCAGT
            [T,C]
            CTTGATCAATTTCGTCAAAAGATTTAGGTTGTCCATCATGTATTTCAGATGATTGCAGTA
            GTAAAGCTTAGTGCACACAATTACCAACCATAGTTATATACATTTGTAAATTTTACTTTT
            TGACTTATTACTTTATGAGTACAGTTCATTTGCACATCTTTGTTGTAACCATGAAACTGC
            CATTAGTACACCTGAGTGTTTATGCTTGCGAAAATGTGTATGTTATTATTGAATATTTTA
            TTGTATAGAGTGGACTATGTGTGTTCTTTGCATTTTTATTTTTCTCAAAACATATAGACA

   39424    TCTTGAGATCTCAGTTCTGTGAGCAATTGCAAGTGTGGTGATGACCCATTGCAGTTCTTG
            ATCAATTTCGTCAAAAGATTTAGGTTGTCCATCATGTATTTCAGATGATTGCAGTAGTAA
            AGCTTAGTGCACACAATTACCAACCATAGTTATATACATTTGTAAATTTTACTTTTTGAC
            TTATTACTTTATGAGTACAGTTCATTTGCACATCTTTGTTGTAACCATGAAACTGCCATT
            AGTACACCTGAGTGTTTATGCTTGCGAAAATGTGTATGTTATTATTGAATATTTTATTGT
            [A,G]
            TAGAGTGGACTATGTGTGTTCTTTGCATTTTTATTTTTCTCAAAACATATAGACATTATT
            TTATGTTTCTCAAATAAAAGAAACATTGCCCTTTTAAAATGTGAATAAATGTCTTTTAAA
            TTTTCTTTTTATTATTTTTTCCAGAATATGTTTTTGGGTTTTTGATCTTTTGAGATTTCA
            ACATTTGGGATTATGGTGTTTGGGATTGTGTCTTTCAGGATTATAGCCAAACCCATTTCT
            TCTCTGCCTCTGAACATCTGCAAACCCACTATTCTAGTCCTCACTTTTAAGGGTACAGGC

   39459    TGGTGATGACCCATTGCAGTTCTTGATCAATTTCGTCAAAAGATTTAGGTTGTCCATCAT
            GTATTTCAGATGATTGCAGTAGTAAAGCTTAGTGCACACAATTACCAACCATAGTTATAT
            ACATTTGTAAATTTTACTTTTTGACTTATTACTTTATGAGTACAGTTCATTTGCACATCT
            TTGTTGTAACCATGAAACTGCCATTAGTACACCTGAGTGTTTATGCTTGCGAAAATGTGT
            ATGTTATTATTGAATATTTTATTGTATAGAGTGGACTATGTGTGTTCTTTGCATTTTTAT
            [T,G]
            TTTCTCAAAACATATAGACATTATTTTATGTTTCTCAAATAAAAGAAACATTGCCCTTTT
            AAAATGTGAATAAATGTCTTTTAAATTTTCTTTTTATTATTTTTTCCAGAATATGTTTTT
            GGGTTTTTGATCTTTTGAGATTTCAACATTTGGGATTATGGTGTTTGGGATTGTGTCTTT
            CAGGATTATAGCCAAACCCATTTCTTCTCTGCCTCTGAACATCTGCAAACCCACTATTCT
            AGTCCTCACTTTTAAGGGTACAGGCTCAGAGGACTAAACTGAGGTTCTCAAGCTTTTATG

   39594    ACTTTTTGACTTATTACTTTATGAGTACAGTTCATTTGCACATCTTTGTTGTAACCATGA
            AACTGCCATTAGTACACCTGAGTGTTTATGCTTGCGAAAATGTGTATGTTATTATTGAAT
            ATTTTATTGTATAGAGTGGACTATGTGTGTTCTTTGCATTTTTATTTTTCTCAAAACATA
            TAGACATTATTTTATGTTTCTCAAATAAAAGAAACATTGCCCTTTTAAAATGTGAATAAA
            TGTCTTTTAAATTTTCTTTTTATTATTTTTTCCAGAATATGTTTTTGGGTTTTTGATCTT
            [C,T]
            TGAGATTTCAACATTTGGGATTATGGTGTTTGGGATTGTGTCTTTCAGGATTATAGCCAA
            ACCCATTTCTTCTCTGCCTCTGAACATCTGCAAACCCACTATTCTAGTCCTCACTTTTAA
            GGGTACAGGCTCAGAGGACTAAACTGAGGTTCTCAAGCTTTTATGTGCATCAGACTCACC
            TGGAAAACTTGTTAAAACACAGCTTGCAAGGCCAACCCCAGAATTTCTGATTTGGGAGGT
            CTGGTGTGAGGACAAGAATTTACATTTCTACCAAGTTCCAGGTGATGCTGATGCTGCTGG

   40279    TGTTGGCAGTTTTCCCACAATTTTCCAAAACTGGTCTTCATCCAGTGTCTCCTCTCATAG
            TAGACATCACATTCATCCAGAAAATAAGGCATTCTCCTATATGCCTTCTTCTCTCTTCCT
            CCACGTTCCTTCTGTCTTCAGGCATTGTCTCACTGGTCCCTGGCCCAGTCTGTCAATCAG
            CTGACATCACTGCCCCCACTTGCTTTGAATCATGCCTCCTCCCTTAATGTCTATGTGTCC
            TTGCATAGGTTGGTTACCAGAGTAGATATACAAAGAATGAATGAGTCTCCCCATCTTTCC
            [A,G]
            ACCTCAAGAACTTGATTAGTGGTATCCTGACTGGAACAATGGAATATGGCCTTTTGTCTG
            CAAACAGAAACAATTATAGCAGGTTTTCTCACTAGGGTCATGTTTGCCTATTTTATGTTA
            ATAAGAGCTGTTGTATTGACTTAGCTGTCTTTATTCTAGTCACTTCTGCTTCACAATAAG
            AGGCTATCTGTGCTTGCGTTCCAGGGGGTGAGTTACTGTCTTATATTGTCTGACAGGGCT
            GTCCCTTGAGGAATATCTTTCCCCAATGCCAGTTCTTGTAGAGGGGCCAGGAGGTCAGAA

   40666    TCTCACTAGGGTCATGTTTGCCTATTTTATGTTAATAAGAGCTGTTGTATTGACTTAGCT
```

```
        GTCTTTATTCTAGTCACTTCTGCTTCACAATAAGAGGCTATCTGTGCTTGCGTTCCAGGG
        GGTGAGTTACTGTCTTATATTGTCTGACAGGGCTGTCCCTTGAGGAATATCTTTCCCCAA
        TGCCAGTTCTTGTAGAGGGGCCAGGAGGTCAGAACTTAAGCTAACAAATGATTATCTTTC
        TCAGCAGAATTACCAGAGGACCTCAGACTCCTGGGTTCCTCCTTAAGGGACTCAGGTTCA
        [G,C]
        ATCTTTGGCCCAGAACACACTGTAACCTCTGAGTTCAGGCTTTAGATGAGGCACCTGTCA
        ATTCCTATGGGACCTCAACCCAGTCTCAAATACTTGGTCAAAAGGTGAGTTGAAACTTAA
        AACAGTACCAGCCCCTGGACAGTATAAGTTGGTCTCATCACATCGAAGTATTCATGATGA
        GCATCATAAAATCTTCTGAGAGTTGGTTTTGATGAACAGATAAGGAAGAATACCAACACC
        CTAAAAGTTGAGGGCAATTCAAGTCCAGATGAGAAGAAACGTGCAGGATTGCAGACTTGG

40723   GCTGTCTTTATTCTAGTCACTTCTGCTTCACAATAAGAGGCTATCTGTGCTTGCGTTCCA
        GGGGGTGAGTTACTGTCTTATATTGTCTGACAGGGCTGTCCCTTGAGGAATATCTTTCCC
        CAATGCCAGTTCTTGTAGAGGGGCCAGGAGGTCAGAACTTAAGCTAACAAATGATTATCT
        TTCTCAGCAGAATTACCAGAGGACCTCAGACTCCTGGGTTCCTCCTTAAGGGACTCAGGT
        TCAGATCTTTGGCCCAGAACACACTGTAACCTCTGAGTTCAGGCTTTAGATGAGGCACCT
        [G,C]
        TCAATTCCTATGGGACCTCAACCCAGTCTCAAATACTTGGTCAAAAGGTGAGTTGAAACT
        TAAAACAGTACCAGCCCCTGGACAGTATAAGTTGGTCTCATCACATCGAAGTATTCATGA
        TGAGCATCATAAAATCTTCTGAGAGTTGGTTTTGATGAACAGATAAGGAAGAATACCAAC
        ACCCTAAAAGTTGAGGGCAATTCAAGTCCAGATGAGAAGAAACGTGCAGGATTGCAGACT
        TGGAATCCCAAAGAGGCACTTAGTAATGGTTATAAACTCTGAGGGTTATTCGTAACTGAT

41090   AGTACCAGCCCCTGGACAGTATAAGTTGGTCTCATCACATCGAAGTATTCATGATGAGCA
        TCATAAAATCTTCTGAGAGTTGGTTTTGATGAACAGATAAGGAAGAATACCAACACCCTA
        AAAGTTGAGGGCAATTCAAGTCCAGATGAGAAGAAACGTGCAGGATTGCAGACTTGGAAT
        CCCAAAGAGGCACTTAGTAATGGTTATAAACTCTGAGGGTTATTCGTAACTGATGCTGG
        CCTTGGGGTAAATGGATATCCTGAGGCTTTGGGCAGAACAGTTGCAAACTCCCCAACCTT
        [C,T]
        TGCTTTTCTTGGAGGTGATGTTTGTATGAAAAGAGCAGTTTTCTGGAATTCACACAATAA
        AATGAGCCCTCTCATTTCAGGCCCTCTGCTGGGTAATCTTGGGCAATATGCTTCCCCTCT
        CTGAGCCTTATTACCCTGTTCCCTCATTTTCGAAGCAGATTCTAACCTCCGATCTGCTTC
        TGTGGTGGCCTCACTGGGATATTCTGAAGCTCAAGTGCTGCTGCTGCTAATAATAATAAT
        ACCAATTACTATAGCAACAGCAACAACTCTAACTGTGAGCACTTGTGCTGTGCCCAGCTC

41260   GACTTGGAATCCCAAAGAGGCACTTAGTAATGGTTATAAACTCTGAGGGTTATTCGTAAC
        TGATGCCTGGCCTTGGGGTAAATGGATATCCTGAGGCTTTGGGCAGAACAGTTGCAAACT
        CCCCAACCTTCTGCTTTTCTTGGAGGTGATGTTTGTATGAAAAGAGCAGTTTTCTGGAAT
        TCACACAATAAAATGAGCCCTCTCATTTCAGGCCCTCTGCTGGGTAATCTTGGGCAATAT
        GCTTCCCCTCTCTGAGCCTTATTACCCTGTTCCCTCATTTTCGAAGCAGATTCTAACCTC
        [C,T]
        GATCTGCTTCTGTGGTGGCCTCACTGGGATATTCTGAAGCTCAAGTGCTGCTGCTGCTAA
        TAATAATAATACCAATTACTATAGCAACAGCAACAACTCTAACTGTGAGCACTTGTGCTG
        TGCCCAGCTCTGCGGATGGTCTCATGTGTTCCATCAGCCCGTTCTTACAGAAGTTCTGGT
        AGGTAGTTACTATCATTATACCCATCCCATAGGCAAAAAAACTCAGCCACAGAAAGGTTA
        AATAGCTTGTCTCAGGTCACATAGCTAATAGTGGTAGAGTCTGTACTGGAACCCAGCACT

41421   AAGAGCAGTTTTCTGGAATTCACACAATAAAATGAGCCCTCTCATTTCAGGCCCTCTGCT
        GGGTAATCTTGGGCAATATGCTTCCCCTCTCTGAGCCTTATTACCCTGTTCCCTCATTTT
        CGAAGCAGATTCTAACCTCCGATCTGCTTCTGTGGTGGCCTCACTGGGATATTCTGAAGC
        TCAAGTGCTGCTGCTGCTAATAATAATAATACCAATTACTATAGCAACAGCAACAACTCT
        AACTGTGAGCACTTGTGCTGTGCCCAGCTCTGCGGATGGTCTCATGTGTTCCATCAGCCC
        [A,G]
        TTCTTACAGAAGTTCTGGTAGGTAGTTACTATCATTATACCCATCCCATAGGCAAAAAAA
        CTCAGCCACAGAAAGGTTAAATAGCTTGTCTCAGGTCACATAGCTAATAGTGGTAGAGTC
        TGTACTGGAACCCAGCACTGTCCTGCATTTAACTGCTATGGTACACTGCTCTGTAGATGT
        TAAAATTACTTTTGGTGAACTTTAAGTAACTATCAATGGAAGATGATTTCTTTGCCATGC
        GACAGTTTGCTCTCCAAGCTTTAAGCGGATCACCAAGGAGTCTAACTCCTCTGGCCCTGA

42640   ACAGGGACAGAGAGGGATGGTTGAAGAAGAGATACATGAGCTAAGATGAGAATGGTAAGT
        GAGAGTTGGCTGTGGGATAATAGTGGGGAAAAATATTCTAGGCAGAGGGAACTTCAAGTA
        CAAAAGTTTTTAGGTGGGTACAAGTTGAGATGGTTCAAGTAATAGAAAGGAAGCCCACAT
        GGGGGTTGGGAGGTGGTGAGCCCTAGAGGTAGAGTGCTAGGAGAGGTGGTTGTAGGGTCA
        GTCAGGGACAAATGATGCAGGGCCTTCTAGACCATGGGCCTTCCTGGGGATCTTCTCTTT
        [C,G]
        AGCCCTCTACGGGCCCAGCCAACCAAGGCAGGAACTGCCTTCTGTGTATTCATCATATCT
        CTGAAGTCCAACCCCAAACCTCTCCAAGGCCAAGTCTGTGTCTTTTTCTTTCTAAATATC
        CTCACCCAAATCTTACACAGTTCTTGACACATAGCAGATTCTCAGGATAGCCTGATGACT
        TCAAGGTATAAGTTAAGGAAGATATTGCAGACCACAGATATATTTTATTTATAACCAAGG
        AAGAGCTTATATTTAGCAAAAGTCTGCACTTCCTCAGTAGGTACTAAGCTCCCTGTTACT
```

FIGURE 3, page 79 of 122

```
42650   AGAGGGATGGTTGAAGAAGAGATACATGAGCTAAGATGAGAATGGTAAGTGAGAGTTGGC
        TGTGGGATAATAGTGGGGAAAAATATTCTAGGCAGAGGGAACTTCAAGTACAAAAGTTTT
        TAGGTGGGTACAAGTTGAGATGGTTCAAGTAATAGAAAGGAAGCCCACATGGGGGTTGGG
        AGGTGGTGAGCCCTAGAGGTAGAGTGCTAGGAGAGGTGGTTGTAGGGTCAGTCAGGGACA
        AATGATGCAGGGCCTTCTAGACCATGGGCCTTCCTGGGGATCTTCTCTTTCAGCCCTCTA
        [C,G]
        GGGCCCAGCCAACCAAGGCAGGAACTGCCTTCTGTGTATTCATCATATCTCTGAAGTCCA
        ACCCCAAACCTCTCCAAGGCCAAGTCTGTGTCTTTTTCTTTCTAAATATCCTCACCCAAA
        TCTTACACAGTTCTTGACACATAGCAGATTCTCAGGATAGCCTGATGACTTCAAGGTATA
        AGTTAAGGAAGATATTGCAGACCACAGATATATTTTATTTATAACCAAGGAAGAGCTTAT
        ATTTAGCAAAAGTCTGCACTTCCTCAGTAGGTACTAAGCTCCCTGTTACTAGAGGTACAT

43285   ATTGAATAGAGGTAGTAGTCATGGTGTTTTGCAATAGAGATAGCAGTAGTGGTCACAATG
        ATAAAAATAGTAATATTCCTATGTATTAAACAGTCAATATATGCCAGACCCTAGATGTAT
        ATTATCTCATTTAAGCTTCCTAAAACAACCTCATAAGGAAATACCATTATTATTTCCACT
        TCCAGTCACAGAGACTGAAACCTCTCACATTTAAGGACTGTGCACCTGGGGTCAGGTAGT
        GAGTAAGTGGTAGGGTCCACTTGAAAACCCATACTTCCAGTCCATACTTGAAAACCCTCT
        [C,T]
        TAGGGAAACTTAATGATTGGAGTCCATATTTTGACTTCATGTATCTTGGCTTTTTATTTC
        TATCCAGAGCTTTATTGCAGGGTGTAGGGGGTGTCACTCTTTTACAGCCTTTACAGCCCT
        TTTACATATATTAGGTAATAATATAGAATTGAATTCTAAAATAGCTGAAAGTATGTTTTT
        TCCTCCAGCAAAATCATTCCCCAAAGATCATCCCCAAACTGATGAGTATCTTGTTCCTGT
        GAGCATTACTGTACTGATCTTTCTCCCGTCATGTAGTACTTTGTTATTTGAGTCATTTCA

44406   AATTGTGTGACCTTGAGCAAGCCCCTTTACTTCATCTAGCTAATAAAAAATAAATAAATA
        AATAAAACAGTCACCTCTGCATAGGTGTATGGCAAGGACTGAGTCAAGAAATTTTTAAGA
        ACACTTAGCCCAGGACCTAGAAGATTCTAGTAAGGGTTTAGTAAATGTTAATTATGGTTG
        TTAGTAACATCATCAAATTTTTAAAATATTATCACACTGACTTTTTGTGAATCTAGACTT
        GCTAGCTCTGGTGTGCATCCAATGATACAAACCCCCATATTCAACATTCCTCTTTGAAAG
        [A,G]
        TTTCACAGAATGTTGTCTGAGCTGACCTTAAAGATACCTTGCAGCTCCAAAGTTCTGTGA
        CTTTCACCAGGAGTCTCAAGGCAAATGCACAGAAGGGTCAGGCAAGTATCGTGAATGGAG
        GCTGGACCAGGGAGCCCATGCATTCTTCCAAAGGCATTTCAATTCAGTCTTGTTAAAGCA
        CTGAGTTGCACAAAAGAAACGTCACTGTTGGCCAGCCTCGGTTCTTCGGCTAGCTCCTTC
        AACCCAAGTGTATCATCTAGGATGGAGGAGGCTTCTGAGGGACTGAGGGAGGACAAATCT

44585   GTTAGTAACATCATCAAATTTTTAAAATATTATCACACTGACTTTTTGTGAATCTAGACT
        TGCTAGCTCTGGTGTGCATCCAATGATACAAACCCCCATATTCAACATTCCTCTTTGAAA
        GGTTTCACAGAATGTTGTCTGAGCTGACCTTAAAGATACCTTGCAGCTCCAAAGTTCTGT
        GACTTTCACCAGGAGTCTCAAGGCAAATGCACAGAAGGGTCAGGCAAGTATCGTGAATGG
        AGGCTGGACCAGGGAGCCCATGCATTCTTCCAAAGGCATTTCAATTCAGTCTTGTTAAAG
        [C,T]
        ACTGAGTTGCACAAAAGAAACGTCACTGTTGGCCAGCCTCGGTTCTTCGGCTAGCTCCTT
        CAACCCAAGTGTATCATCTAGGATGGAGGAGGCTTCTGAGGGACTGAGGGAGGACAAATC
        TTGGAAAGAGAGGTACAAGGAAGAGATGGGATTTGGATAAGGCAAGGAAGAGCCAGGAGG
        CTTTGGATGAACTGACCTCTAGATACATTCATTTTTATGCCAAAAGTCCATTTCCCACTC
        TTTAAACCCCTTCACCTCTTCTCAAGAAACTTGTGTCTCAGCTTCAGAGAGCCATGGCCT

44772   ACCAGGAGTCTCAAGGCAAATGCACAGAAGGGTCAGGCAAGTATCGTGAATGGAGGCTGG
        ACCAGGGAGCCCATGCATTCTTCCAAAGGCATTTCAATTCAGTCTTGTTAAAGCACTGAG
        TTGCACAAAAGAAACGTCACTGTTGGCCAGCCTCGGTTCTTCGGCTAGCTCCTTCAACCC
        AAGTGTATCATCTAGGATGGAGGAGGCTTCTGAGGGACTGAGGGAGGACAAATCTTGGAA
        AGAGAGGTACAAGGAAGAGATGGGATTTGGATAAGGCAAGGAAGAGCCAGGAGGCTTTGG
        [A,G]
        TGAACTGACCTCTAGATACATTCATTTTTATGCCAAAAGTCCATTTCCCACTCTTTAAAC
        CCCTTCACCTCTTCTCAAGAAACTTGTGTCTCAGCTTCAGAGAGCCATGGCCTCATTTAA
        AATGTTGTGAAAGAAGGTGATGGAAGCATCAGGTTCCTAGGCTGGTGAATTTTTATTTTT
        ATTTCTCCATTGACACAGTTTAACCTTTGCTTTTGGCAGCTAGCATATTGCTCAAATAAA
        GTGAAGAGAAGGGTGTGGGGGAGAAGGCAAGAGATATTTGGCTAGAAGGTTATGAGAATC

45507   ATAACTCACCCATGGTCACCTATGTGAAAAAAGTGCAGAGCTAAGAATGGAATTGAAATC
        TGTCAAACTCCAGAGTGTAGAGACTGACCAAGTAGACCCCCCACTTCCAGGCCAATGCAT
        TTCGGCACTTGATTTGTGGCAAGGAGTCCTCTCAGGGTTTTGGGGCTATGCTGGTGCTTG
        CTATGCTGCCTCGGAAATGTCACCTAACCTAGAAATAGTGTTTATTCTGTTACAAAGCAA
        GTTGGAAGAAAAGAAAACACTCCTTTTTTCTTTTTTCTGTGCCTCCTCTCCTTACTTTCC
        [C,T]
        CTGAAACTTAAGTTCCAAGGAGTGCAATTAGCAGGTCAGCTTGTCTTGCTGAACAGTCAG
        GTTACTTTCCCTCAGTATTTGATGCCAAGTGAATGTTGAGCTGAAAGGCTGGCTGATAAA
        TGCCCCTCTGGGGAGAAGGAACTGTGAAATAGCCTGGATCTATTGGCAGATACTAGGGCC
        AAAAAGTCCTTAGAAACTCAACCTGAAAAAAATGTCTAGGGAAAGCAAAACGGCCAACTA
        AGGTAGTAAACACTTCAGAAAACCTTGATAATAGCAATTTGGAAAATCTTGCATGTACAG
```

FIGURE 3, page 80 of 122

```
46883   GTAAATTTAGAATGTCAAACACGTACAGACTAATGCTATTTACCCACCATCCACCACCAT
        TGTTTATCCAGTTGTTTATTCAATTGCAAATGGCTTCTTAGCCTGTTGGAGAAATGATCT
        GAGGTGGTCAGAGGTATGGCCCATATCTGTCAAATAAAGCAACCTCCTGGCACATATGAT
        AGGCCAAAACCCTATCACTTGGGATTTGTGAACAACATTCTCCAGTCAGCTGAACAAGCA
        GGTGCTAGAAAAGAGTGTAAATAATTCAACTTGTTTCAGGACATGTGTTTAGGTGAGTAA
        [C,T]
        GTGAATGTGAACAGTTTTTATCTTTTATTTCTTGGTCTCAAGTTGGCACTATTAGGCATC
        CATTCCTAACATAAAATAGTGTCTATGAATGGCAGCTGGTCATTAGATGTACATATCCAA
        ATCCAAGATCAGTACAATTTTCACCTCCACCTTGTCTTACCTCTTGCACTCCCTAACTCA
        GTGGCAGTGCCACAATCCACCTAATCACCCAGAAAGAGACCAAGAGACTTTTGATTCTTT
        TTCCCTTATCCATGTCTTTGATCTGCCACCAAGTTCTGGAGCTGTTACCTCTACTGTCTC

47855   CTTTCTTCATCCCTGTCTCCTCTCAAGACTTTTAATCGTCCCTCAGGGCCAAGTTTAGAT
        CTAACCCCTACCAATAAGCTTTCCTCAATCTCCCACCCCTACCTCCACAAGAATTAGCCT
        TCCCCCATTATATCCCTTATCATTCTGCCGTACATTAGCAAGATTTGTATGCATGACTGT
        TAGACTGACAGCTCCCTTTGGGGGAAAGGGCCTTCTTGTGCTCATCTGTCCATCTCCTTT
        CTCTCTTCTTCCTCTTGCCTCCTCCCTCCTAACCTCCTCCAGCCCAGCATCTAAGTGCAG
        [G,T]
        ACATTTCACATAAGAGACACCCCAGCAAAGTGTGTTGAATAGAATCCATTAATTTGCATT
        CCATTTCTTTGGAAATAGCTTTTGGGATCCATTGGGCAGATAGTGAAAATTTCAACTAAC
        ATGATGGTGGAGAAAAACCTTAACTTTTGTGCTCATGTTAAATTTAGAAACATTTTGTTT
        CATTCTATCACCTCTGCTAACCTCTTAACTAACTTGAGGTTATGGAGAAAGGGCAGAAGA
        CTTATTTTTCTACTTCTTTAATATTTCCGGTCAATTCTCTCTTCTCCATCAGTATTGCCA

47885   TTTAATCGTCCCTCAGGGCCAAGTTTAGATCTAACCCCTACCAATAAGCTTTCCTCAATC
        TCCCACCCCTACCTCCACAAGAATTAGCCTTCCCCCATTATATCCCTTATCATTCTGCCG
        TACATTAGCAAGATTTGTATGCATGACTGTTAGACTGACAGCTCCCTTTGGGGGAAAGGG
        CCTTCTTGTGCTCATCTGTCCATCTCCTTTCTCTCTTCTTCCTCTTGCCTCCTCCCTCCT
        AACCTCCTCCAGCCCAGCATCTAAGTGCAGTACATTTCACATAAGAGACACCCCAGCAAA
        [C,G]
        TGTGTTGAATAGAATCCATTAATTTGCATTCCATTTCTTTGGAAATAGCTTTTGGGATCC
        ATTGGGCAGATAGTGAAAATTTCAACTAACATGATGGTGGAGAAAAACCTTAACTTTTGT
        GCTCATGTTAAATTTAGAAACATTTTGTTTCATTCTATCACCTCTGCTAACCTCTTAACT
        AACTTGAGGTTATGGAGAAAGGGCAGAAGACTTATTTTTCTACTTCTTTAATATTTCCGG
        TCAATTCTCTCTTCTCCATCAGTATTGCCAGTGCCTTCGTTGAGACAGGTCATCTTTGTG

47941   AATCTCCCACCCCTACCTCCACAAGAATTAGCCTTCCCCCATTATATCCCTTATCATTCT
        GCCGTACATTAGCAAGATTTGTATGCATGACTGTTAGACTGACAGCTCCCTTTGGGGGAA
        AGGGCCTTCTTGTGCTCATCTGTCCATCTCCTTTCTCTCTTCTTCCTCTTGCCTCCTCCC
        TCCTAACCTCCTCCAGCCCAGCATCTAAGTGCAGTACATTTCACATAAGAGACACCCCAG
        CAAAGTGTGTTGAATAGAATCCATTAATTTGCATTCCATTTCTTTGGAAATAGCTTTTGG
        [A,G]
        ATCCATTGGGCAGATAGTGAAAATTTCAACTAACATGATGGTGGAGAAAAACCTTAACTT
        TTGTGCTCATGTTAAATTTAGAAACATTTTGTTTCATTCTATCACCTCTGCTAACCTCTT
        AACTAACTTGAGGTTATGGAGAAAGGGCAGAAGACTTATTTTTCTACTTCTTTAATATTT
        CCGGTCAATTCTCTCTTCTCCATCAGTATTGCCAGTGCCTTCGTTGAGACAGGTCATCTT
        TGTGGTTAAAGTTTGAAGTCCCTGAGATAAGACTATCTGGGTTTTAATACTAGTTATGCT

48328   TTTTGTTTCATTCTATCACCTCTGCTAACCTCTTAACTAACTTGAGGTTATGGAGAAAGG
        GCAGAAGACTTATTTTTCTACTTCTTTAATATTTCCGGTCAATTCTCTCTTCTCCATCAG
        TATTGCCAGTGCCTTCGTTGAGACAGGTCATCTTTGTGGTTAAAGTTTGAAGTCCCTGAG
        ATAAGACTATCTGGGTTTTAATACTAGTTATGCTAACAGACAGACCTTGGGTGAGTTAGT
        TACTCTTTCTGGGCCTCAGTTTCCTCAACCATAAAATGAAAATATTAATGCTACCCATTT
        [T,A]
        GTAGAGAGAGATTCCACAGGCCTAGTTGGTGGCCAGGGAACCCTGGGATAATAAAAGCAA
        TCGGACATCTTGGGAACCAGGTAATCTCCTAACATTCCAAAGATACCTGCTGTCCCCTCT
        CAACGCCATACAGTGTGTGCCAGTAGATTATAAACTGCATAAGGAAAGAGATGATGTCTG
        CTCTCCTCCATATCCCTGGCTCCTGACACATAAGAGGATCATAAACGCACTTTGCAAAGC
        AAATGCCAGCTCTGGAATTCTGCAGCAGCCTGGAGACCAGACCCTGCACATCAAGGCCCA

48391   GAAGACTTATTTTTCTACTTCTTTAATATTTCCGGTCAATTCTCTCTTCTCCATCAGTAT
        TGCCAGTGCCTTCGTTGAGACAGGTCATCTTTGTGGTTAAAGTTTGAAGTCCCTGAGATA
        AGACTATCTGGGTTTTAATACTAGTTATGCTAACAGACAGACCTTGGGTGAGTTAGTTAC
        TCTTTCTGGGCCTCAGTTTCCTCAACCATAAAATGAAAATATTAATGCTACCCATTTTGT
        AGAGAGAGATTCCACAGGCCTAGTTGGTGGCCAGGGAACCCTGGGATAATAAAAGCAATC
        [G,A]
        GACATCTTGGGAACCAGGTAATCTCCTAACATTCCAAAGATACCTGCTGTCCCCTCTCAA
        CGCCATACAGTGTGTGCCAGTAGATTATAAACTGCATAAGGAAAGAGATGATGTCTGCTC
        TCCTCCATATCCCTGGCTCCTGACACATAAGAGGATCATAAACGCACTTTGCAAAGCAAA
        TGCCAGCTCTGGAATTCTGCAGCAGCCTGGAGACCAGACCCTGCACATCAAGGCCCAGTG
```

FIGURE 3, page 81 of 122

```
          GAAAACTAATGATTTCTCCCCCGCAGACCTGCCTAGCGAAGGGCCCCGTGGAGCTTGGCT

48453     CCAGTGCCTTCGTTGAGACAGGTCATCTTTGTGGTTAAAGTTTGAAGTCCCTGAGATAAG
          ACTATCTGGGTTTTAATACTAGTTATGCTAACAGACAGACCTTGGGTGAGTTAGTTACTC
          TTTCTGGGCCTCAGTTTCCTCAACCATAAAATGAAAATATTAATGCTACCCATTTTGTAG
          AGAGAGATTCCACAGGCCTAGTTGGTGGCCAGGGAACCCTGGGATAATAAAAGCAATCGG
          ACATCTTGGGAACCAGGTAATCTCCTAACATTCCAAAGATACCTGCTGTCCCCTCTCAAC
          [A,G]
          CCATACAGTGTGTGCCAGTAGATTATAAACTGCATAAGGAAAGAGATGATGTCTGCTCTC
          CTCCATATCCCTGGCTCCTGACACATAAGAGGATCATAAACGCACTTTGCAAAGCAAATG
          CCAGCTCTGGAATTCTGCAGCAGCCTGGAGACCAGACCCTGCACATCAAGGCCCAGTGGA
          AAACTAATGATTTCTCCCCCGCAGACCTGCCTAGCGAAGGGCCCCGTGGAGCTTGGCTGG
          TGAGAGCATTCTTCATTCTCCGCATGTCCCTGGCTCTCCCTCTCTCTCCCCACCTCCGCA

48690     CGGACATCTTGGGAACCAGGTAATCTCCTAACATTCCAAAGATACCTGCTGTCCCCTCTC
          AACGCCATACAGTGTGTGCCAGTAGATTATAAACTGCATAAGGAAAGAGATGATGTCTGC
          TCTCCTCCATATCCCTGGCTCCTGACACATAAGAGGATCATAAACGCACTTTGCAAAGCA
          AATGCCAGCTCTGGAATTCTGCAGCAGCCTGGAGACCAGACCCTGCACATCAAGGCCCAG
          TGGAAAACTAATGATTTCTCCCCCGCAGACCTGCCTAGCGAAGGGCCCCGTGGAGCTTGG
          [T,C]
          TGGTGAGAGCATTCTTCATTCTCCGCATGTCCCTGGCTCTCCCTCTCTCTCCCCACCTCC
          GCAGCCTCCCAGTCAAGCTATTGTGCATCTCCTGCTCTCTGTGTCTCGCTGCCTGGGTCC
          CTTTCTGCGCTGCTGCCTAAGCATTGTCTGTGATGTCTTTAGTGTGAAAGGTGATTCACA
          GAAATAAATTGCATTGTGTTTAGGTCCATAGCAATCTACCTCTGTAATCATGTCTGTAA
          GGGACTTCATAATAGTGTGAGGGCCTTGGTGTCAGAACCAGGGTCTCCAGTGGCTTCAAG

49100     TGCCTGGGTCCCTTTCTGCGCTGCTGCCTAAGCATTGTCTGTGATGTCTTTAGTGTGAAA
          GGTGATTCACAGAAATAAATTGCATTGTGTTTAGGTCCATAGCAATCTACCTCTGTAAT
          CATGTCTGTAAGGGACTTCATAATAGTGTGAGGGCCTTGGTGTCAGAACCAGGGTCTCCA
          GTGGCTTCAAGATAGATAAGTGCTGCAACCAAATGCACATTCAGCCAGTGAAGTTGCAAG
          TTAGAGGTGAAGATGGAGGTGCTGCTGCTATGAAGCAACCATACTCTCAGCCCTTTTATC
          [T,C]
          GCAGGTTGATAAAAATCAATCAAAACATGAGATGTGGTTTTTTGTTTGTTTTTAATAACC
          ACTGGAAAACTAAGACTTGTTTAATAGAGTCTCAGCCAACAGCTTGTGCTCTTACCAGCC
          CTGTGATTAGACGAAAGGGAAAGTTCAAAGTGTCACCTAGAAGGGGGAGGCACCAAAGAA
          GAAGAGGCAGGGAGGTGATACAGTGAAAGGCAAGGAGGAGCTGGGCTGGAATCTGAGAAA
          CCTGAGACTGATTTGTTCTAATCATCATCCTATGTGATGGTGGAAGATAAGAACCACAGA

50598     TGGAATGACACTGGCTGGGTTTGTGAACTAATCAAACCTCATGAAGGGGTAACTAGCTGG
          CCAGGGCTGAGAGAATGATTAAATTAGGTCACTGTTTCCTAAACACAACCCTTCTCCTAT
          CTTCATGTATTTATCATATCTGTGCATTTACTTATATTTTCCTTTAACAAACATATTTTA
          ATTAAAGTTATTTAAAAAGGAAACATATCAACTATTGCAAATAGAAAAACCAGTATCACT
          ATTAATAGGTAGAAGCTATAAAATTAAAACAAAGCATTGTTATTATATTCTAGCCATATG
          [C,A]
          CATTGCATTCATAGCGTTCTGAGCCTGATTCTTGCCTCTTTTTGTTTAAAATAAAAGGGA
          AATGGCAAGGTATGGAGATAAATAATTTACCAAACAGATTTTCTTTTTCACTTAATAGCA
          GGAATAAAAGGAAATTTAAAATGAATGTGCATACGCATTGTGAGTCTGTTGTTTAATGCC
          ATTCTCACATTGGGAAATTCCACTCACCATACCTGGGTTCTAGTCTTTACTGAGCAATTA
          AATTGCTATATGGCTAGCTCACCTTCTTGTACCTCAATTTGTACATATGTAGAATGAGGT

50753     ATTTTCCTTTAACAAACATATTTTAATTAAAGTTATTTAAAAAGGAAACATATCAACTAT
          TGCAAATAGAAAAACCAGTATCACTATTAATAGGTAGAAGCTATAAAATTAAAACAAAGC
          ATTGTTATTATATTCTAGCCATATGCCATTGCATTCATAGCGTTCTGAGCCTGATTCTTG
          CCTCTTTTTGTTTAAAATAAAAGGGAAATGGCAAGGTATGGAGATAAATAATTTACCAAA
          CAGATTTTCTTTTTCACTTAATAGCAGGAATAAAAGGAAATTTAAAATGAATGTGCATAC
          [G,A]
          CATTGTGAGTCTGTTGTTTAATGCCATTCTCACATTGGGAAATTCCACTCACCATACCTG
          GGTTCTAGTCTTTACTGAGCAATTAAATTGCTATATGGCTAGCTCACCTTCTTGTACCTC
          AATTTGTACATATGTAGAATGAGGTTGGTGAGTTGAAATACAGAATTCCTTTAAACCCAA
          GTTTCTCAATGTTGCTCACGGGCAAGCTGCACCTGAATTTTCTGTGTAGGTATACTTGTT
          GAAAAATGTTAATTTCTAAGCTCCATCCAAGATATTCTGAAAAAGAATTTCTGGAAATTT

54798     GTGGCAATGTTGGAATGGTGACAATGTTGTAATCCCAGTGGTAATATTATAATGGTGGCA
          GTTGTGGTGGTGGTGGTGATGATGATGATAGTAACAAATGAGGATGATAAGAATCAACAG
          CTAACATTTGTAGAGAGTTTACTATTGTATATACAAGGCATGGTACTAAGTACTTGCATA
          TATCTAATTTCATCCTTTTGACTTCTTTTAGATATGGCCAGTACTCCACATCTTTCAAGT
          GGGTGAACTGAGGTTTCAGAAGTTGAGTAATTTCCTGAGAGCCTACATTTAGTAAACTAA
          [G,C]
          ACAAAGTCAGAATTTGATACAGGCCATATGATGTCATCATATATATGTAAAGTGCTCAAC
          TGTTGGTTACTTGAATGAGGAAGGAAAGAAGGAAGAAAGAGAAGGAGTGAGGGAGGGAGG
          AATTTACTTGTTTTCTAATCTTAAGATTCCTTTTCTGAAAATAGAGATAATTCTAGCATT
```

```
         TATGGAAATCAAATGAGATTAAAAAAAGTCAAAGCTCTTTGAAAACTGTCAAGTCTTCTC
         TATGTACGAGGGCTAAACCATCAGAGGCAGCTTCATAATTACTCATTCATTCATTCAATA

55058    AGTTGAGTAATTTCCTGAGAGCCTACATTTAGTAAACTAAGACAAAGTCAGAATTTGATA
         CAGGCCATATGATGTCATCATATATATGTAAAGTGCTCAACTGTTGGTTACTTGAATGAG
         GAAGGAAAGAAGGAAGAAAGAGAAGGAGTGAGGGAGGGAGGAATTTACTTGTTTTCTAAT
         CTTAAGATTCCTTTTCTGAAAATAGAGATAATTCTAGCATTTATGGAAATCAAATGAGAT
         TAAAAAAAGTCAAAGCTCTTTGAAAACTGTCAAGTCTTCTCTATGTACGAGGGCTAAACC
         [A,G]
         TCAGAGGCAGCTTCATAATTACTCATTCATTCATTCAATAGATATTTGGTTTTCTGTTTT
         AGGCACTAGAATATAGTGGGCAAAACAAACTAAAGTGCCTGCCCTCAGTGAGCTTTCAGT
         CGAGTCTAGTGACAGACAAGCAAATGCCAGGTGAAATATATAGTCCTGTGGGAAAAAATA
         AAGCATGGAGGGGGTGAGGGAATATGTGTGTATGTTGGGGGTGGGGTCACTCTTTAAATA
         GGGTGGTGAGGGAAGGCCTCTGATAAGGTGATATCTGAGCAGGGCCTGAAAAAGGTAAGC

55171    GAATGAGGAAGGAAAGAAGGAAGAAAGAGAAGGAGTGAGGGAGGGAGGAATTTACTTGTT
         TTCTAATCTTAAGATTCCTTTTCTGAAAATAGAGATAATTCTAGCATTTATGGAAATCAA
         ATGAGATTAAAAAAAGTCAAAGCTCTTTGAAAACTGTCAAGTCTTCTCTATGTACGAGGG
         CTAAACCATCAGAGGCAGCTTCATAATTACTCATTCATTCATTCAATAGATATTTGGTTT
         TCTGTTTTAGGCACTAGAATATAGTGGGCAAAACAAACTAAAGTGCCTGCCCTCAGTGAG
         [C,T]
         TTTCAGTCGAGTCTAGTGACAGACAAGCAAATGCCAGGTGAAATATATAGTCCTGTGGGA
         AAAAATAAAGCATGGAGGGGGTGAGGGAATATGTGTGTATGTTGGGGGTGGGGTCACTCT
         TTAAATAGGGTGGTGAGGGAAGGCCTCTGATAAGGTGATATCTGAGCAGGGCCTGAAAAA
         GGTAAGCCAGGGAGTCACACAGAATCTGGGAAAAAAGTGTTTTATATCCCACAGGGGAGT
         TTAAAAGTCAAATGAGGAATGATATCACTGTGATAAGAATGCTAGGAATGGGATTATGCA

55801    TGCAGTCAAGTCAGTCTTTTCCTTGGTAACCTCCTCTGGTGGGGTCTCTGAAGGCTCAGT
         CAAGGTGTGATGTCCCAGGGGAGATACTATTATCTGAAAGCATGGTTCCTCTGGCAACAG
         GCAATGGGTCTGAGGGAGATATCTTCTATTCTCCATTCAACCATCCATGAGCATGATGAC
         ACTAGGCAGGTCATCTGTGCTCATGGCATCACCCCTTCCAGCTGGGAAAGACAAAGGAAA
         GTCAGGGAGGTTCTCCCCACATCAAATGGAAAAGTCCTGCTCCACCAGGGTCTATAATGA
         [G,A]
         ATGGTTTATTTAAGTCTATAATGACCTAAGATAAAGTTAATTTACTTTATTCAGATTTAC
         AGACATTACCAAATTACATAGGATTGCAAACACAGGAGAAGATAAAATAAATTACCAACC
         AGATTGAAGAGCTTAGAGAAATAGGTAAATAGTCATGGGAAGAGATTTAATTTAGATAAA
         CCAAAGGCAGGATATCTGGAAAATGCCAAGGTCAGGGAAAAGCCGAGAGGAAAAGATAGC
         TAGTAAGATGGAAGAGACATGGAAAGGATTCAGAAAATGACGTTGGTGATAGTGAGTGTG

56324    CCGAGAGGAAAAGATAGCTAGTAAGATGGAAGAGACATGGAAAGGATTCAGAAAATGACG
         TTGGTGATAGTGAGTGTGGCCAGTATTATGATAAAGATAGAGGGAAATGGGAAAGATATTA
         CTGAAAAATATGGCTTCTCCTTAGAATCCCAAAATAAATGAGGTAATTTGTGGAAAGCAG
         TGCCAGACTGGATTCTGTGGTCTTAGTTCCAAGTCTGCTAGGAACTGCCTCTGCAACTTG
         GGAAAGCTTTTTGATTTTTTTCTAACCTTTAGCTTCCTCTTCTGTTATGACATACAATAC
         [A,G]
         GTTCTAAGTCTAAATGTTTCTAGTTCTCTTGTGTTTAAGGAAGGCGCCATGTGCTCTGAG
         GAGACCCTGAATCCATCCCTGGTCCTCCTGGCTGACCTTAATAGAAACATTGAAAGATGG
         AGATTCATGACAAGTAGTCAAACGGAAAGGCATTCATTTTGGAGATGGATCAAGGGTCCA
         GGCTCATCGGAGACACTGAAAAAGTTGAAAGGTTGCAAAATTGAGGGAGAACGACAGTTA
         TGATAGTTCAGTATAACTGGGTTTTGCCAGAGGTTGTAGAAAAAAGTTAAAGATTGATTT

56557    CAACTTGGGAAAGCTTTTTGATTTTTTTCTAACCTTTAGCTTCCTCTTCTGTTATGACAT
         ACAATACGGTTCTAAGTCTAAATGTTTCTAGTTCTCTTGTGTTTAAGGAAGGCGCCATGT
         GCTCTGAGGAGACCCTGAATCCATCCCTGGTCCTCCTGGCTGACCTTAATAGAAACATTG
         AAAGATGGAGATTCATGACAAGTAGTCAAACGGAAAGGCATTCATTTTGGAGATGGATCA
         AGGGTCCAGGCTCATCGGAGACACTGAAAAAGTTGAAAGGTTGCAAAATTGAGGGAGAAC
         [G,A]
         ACAGTTATGATAGTTCAGTATAACTGGGTTTTGCCAGAGGTTGTAGAAAAAAGTTAAAGA
         TTGATTTGAAATGGTTGAGGGGTATGTACAATGCAGAAGGAGGGGTGAGTTAAATAAGAC
         AATTTATAGGCTGGATGTCTTCAGGGACTGGGGGGAAGTTTGGGTATCTTTAAGATGGCA
         TGGCAGTCTGACATACAGGAATAGTTGTATCCACTGCAAATCATAACCTTCTATGCATTT
         CAGGGTCGGCTTAAGGATATTTGCAAAGAACATACTGGAGGGAGAACATCAGACTTGTCC

56716    CTGACCTTAATAGAAACATTGAAAGATGGAGATTCATGACAAGTAGTCAAACGGAAAGGC
         ATTCATTTTGGAGATGGATCAAGGGTCCAGGCTCATCGGAGACACTGAAAAAGTTGAAAG
         GTTGCAAAATTGAGGGAGAACGACAGTTATGATAGTTCAGTATAACTGGGTTTTGCCAGA
         GGTTGTAGAAAAAAGTTAAAGATTGATTTGAAATGGTTGAGGGGTATGTACAATGCAGAA
         GGAGGGGTGAGTTAAATAAGACAATTTATAGGCTGGATGTCTTCAGGGACTGGGGGGAAG
         [T,G]
         TTGGGTATCTTTAAGATGGCATGGCAGTCTGACATACAGGAATAGTTGTATCCACTGCAA
         ATCATAACCTTCTATGCATTTCAGGGTCGGCTTAAGGATATTTGCAAAGAACATACTGGA
```

```
        GGGAGAACATCAGACTTGTCCTAGTTGCTTGGGTCCCGGGTTAGTTCACCACTACAGCAA
        TGTGGGAGCTAACTGCATGCTAAGCTTGGCATGCAGGGATTGGCAAACCTTTTCTGTAAA
        AACCCAGATAGTAAATGTTTTAGATTTTGTGAGCCATACGGTCTCTGTCACAATTACTCA

58247   CCAAGGAAACACAGTTTATTATAAGTGCCAAAGTCAGGCCTCAAACTCAGCTCTGCTCCC
        ACAGCTGACACTCCTAACCAACACATTGTCCTATTGCACAACTGCAGCATTCTTTCATTA
        GTGGGTATGTTAATGTGAAGAACCAGCACTTGGACCAGTGCCTTATAAGGATCCTTTGAA
        ACCAAGATTTTATTGTGGTTGAAGGGCAGAGAGCTAAATCACCAAAATGTGTAAGTAGAG
        ACAGACCAGAATGTAATCTCCATGAAAGCAATGTCCTTCTCTGTTTTTTAATTTTTTCAC
        [C,T]
        ATGTTATCCCTAGCACTTAGTTGTGTCTGATAAATATTTGAATAAATGCATCAGTATGTG
        AACATTATTTGGAATTATTTTTTCTTTTTAATATCAAAAATCTCATAACCACCTAGGCCA
        AGCTTAACCCGTGGGCCTCAGGCCGCATGCAGCCCAACACGGCTTTGAATGAGGCCCAAT
        ACAAATTTGTAAAGTTTCTTAAAACATTTTGAGACTTTTTGTGTGATTTTTTTTTTAGCT
        CATCAGCTATTGTTAGTGTTAGTGTATGTGATGTGTGGTCCAAGACAATGCTTCTTCTTT

62318   CTAACCTGTCTATCTTAATAGGATGTTGTAAGAATTAACTGAAATAATGTACAGTCTGCC
        TCACAATCATCTGGACGGCTTGAGAAAGCACAGATTGCCAGATCCCACCCCCAGAGGTTC
        TAATTCAGTAGGTCTGGGGTTGGACCCAAGAATTTATATTCTTTTTTATTATGATGATGA
        TTATTATACTTTAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATATGTAT
        ACAATGAATTTATATTCTTAACAAGCTCTCAAGTGATGCTGATATAGCTGGTCTGGGGAT
        [T,C]
        ACAGTAAGAAAACCACTGCTTTAGGTCAATGCAGTTTTTTTTAAAAGCTATTATTCATAA
        CTGGCTCAAGAGTCATGTAAGTGTTGATTATGTTTTATTATGTGTCTAGACCCTTAATAG
        ACTACTCAGGATATGCACAAATAGAAGATGTAATATTTTCTGTAGCATTCCCTACACCAA
        ATCGGCCTTGCTCGGTCATGCATAGTTAATGTATGTGTTGATTTTATTTGTCTTCGTGTG
        GCTTCTAGTCTCACTAGAAAGACATACATTTATTTGAATGTTGTAGAATGATATTATTCA

62429   CAGAGGTTCTAATTCAGTAGGTCTGGGGTTGGACCCAAGAATTTATATTCTTTTTTATTA
        TGATGATGATTATTATACTTTAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTA
        CATATGTATACAATGAATTTATATTCTTAACAAGCTCTCAAGTGATGCTGATATAGCTGG
        TCTGGGGATTACAGTAAGAAAACCACTGCTTTAGGTCAATGCAGTTTTTTTTAAAAGCTA
        TTATTCATAACTGGCTCAAGAGTCATGTAAGTGTTGATTATGTTTTATTATGTGTCTAGA
        [C,A]
        CCTTAATAGACTACTCAGGATATGCACAAATAGAAGATGTAATATTTTCTGTAGCATTCC
        CTACACCAAATCGGCCTTGCTCGGTCATGCATAGTTAATGTATGTGTTGATTTTATTTGT
        CTTCGTGTGGCTTCTAGTCTCACTAGAAAGACATACATTTATTTGAATGTTGTAGAATGA
        TATTATTCATTGGAATAAAATCGGATCTTTTTACAGTTTTTTTTGTTTGTTTGTTTCTTA
        ATGAGCAGGCCTATGATTCCTAAAGGACTTTTTATTTTATTTCATTTGAACCTTTGATAG

62449   GTCTGGGGTTGGACCCAAGAATTTATATTCTTTTTTATTATGATGATGATTATTATACTT
        TAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATATGTATACAATGAATTT
        ATATTCTTAACAAGCTCTCAAGTGATGCTGATATAGCTGGTCTGGGGATTACAGTAAGAA
        AACCACTGCTTTAGGTCAATGCAGTTTTTTTTAAAAGCTATTATTCATAACTGGCTCAAG
        AGTCATGTAAGTGTTGATTATGTTTTATTATGTGTCTAGACCCTTAATAGACTACTCAGG
        [A,G]
        TATGCACAAATAGAAGATGTAATATTTTCTGTAGCATTCCCTACACCAAATCGGCCTTGC
        TCGGTCATGCATAGTTAATGTATGTGTTGATTTTATTTGTCTTCGTGTGGCTTCTAGTCT
        CACTAGAAAGACATACATTTATTTGAATGTTGTAGAATGATATTATTCATTGGAATAAAA
        TCGGATCTTTTTACAGTTTTTTTTGTTTGTTTGTTTCTTAATGAGCAGGCCTATGATTCC
        TAAAGGACTTTTTATTTTATTTCATTTGAACCTTTGATAGAAACTGCATCTTTCATGTGA

62450   TCTGGGGTTGGACCCAAGAATTTATATTCTTTTTTATTATGATGATGATTATTATACTTT
        AAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATATGTATACAATGAATTTA
        TATTCTTAACAAGCTCTCAAGTGATGCTGATATAGCTGGTCTGGGGATTACAGTAAGAAA
        ACCACTGCTTTAGGTCAATGCAGTTTTTTTTAAAAGCTATTATTCATAACTGGCTCAAGA
        GTCATGTAAGTGTTGATTATGTTTTATTATGTGTCTAGACCCTTAATAGACTACTCAGGA
        [T,A]
        ATGCACAAATAGAAGATGTAATATTTTCTGTAGCATTCCCTACACCAAATCGGCCTTGCT
        CGGTCATGCATAGTTAATGTATGTGTTGATTTTATTTGTCTTCGTGTGGCTTCTAGTCTC
        ACTAGAAAGACATACATTTATTTGAATGTTGTAGAATGATATTATTCATTGGAATAAAAT
        CGGATCTTTTTACAGTTTTTTTTGTTTGTTTGTTTCTTAATGAGCAGGCCTATGATTCCT
        AAAGGACTTTTTATTTTATTTCATTTGAACCTTTGATAGAAACTGCATCTTTCATGTGAC

62554   GTATACAATGAATTTATATTCTTAACAAGCTCTCAAGTGATGCTGATATAGCTGGTCTGG
        GGATTACAGTAAGAAAACCACTGCTTTAGGTCAATGCAGTTTTTTTTTAAAAGCTATTATT
        CATAACTGGCTCAAGAGTCATGTAAGTGTTGATTATGTTTTATTATGTGTCTAGACCCTT
        AATAGACTACTCAGGATATGCACAAATAGAAGATGTAATATTTTCTGTAGCATTCCCTAC
        ACCAAATCGGCCTTGCTCGGTCATGCATAGTTAATGTATGTGTTGATTTTATTTGTCTTC
        [G,A]
        TGTGGCTTCTAGTCTCACTAGAAAGACATACATTTATTTGAATGTTGTAGAATGATATTA
```

```
            TTCATTGGAATAAAATCGGATCTTTTTACAGTTTTTTTTGTTTGTTTGTTTCTTAATGAG
            CAGGCCTATGATTCCTAAAGGACTTTTTATTTTATTTCATTTGAACCTTTGATAGAAACT
            GCATCTTTCATGTGACCACTCTCCATTTTTCTGCTCATATGACCACATTTCCCAGTAGTC
            TTTAAAGGCTCCAGTTTGGATGGGATTTCGATTAATGGAAGAGAACAGATAGCTCTGTAA

    63688   AGAGGTCCCAAACTGGTGTTCTATGGATTGCATCCAGTGATTTTATGTGTAGCATAACTT
            TTTAAGAGGAAGAGAGAAGAAAATTGACTTTGCGATCACATTACAAAAAAACATCATGA
            GACTTTGAATAGAAATTTGGATTTTCAGCAAAAAAAAAGAAAAAAAAAAAAGAAGAAGGTT
            TGGCAGTACTGGACTCCCATCTTTAAGGGTAACAGCCGAATGCTGGCCACGTCCTGTAAG
            AACCCACACTCTCCAGTTTGCTGCTGTCCATACCAGCTTGTGTGACTCCTTTACATTACC
            [T,C]
            GCTTGACTCCTAAAGGTATTTCAATTAGTGGCCTGTTTTTGCTCTTTTTGGCAAGTTCAC
            AGACTTACAGAGTTTGAAAGCTAAAGGAGTCCCTGAGAACAAGGATTTTCTAATGTTACT
            TCACATCAAAATCACCTATACCCTATAACCAGGCTGCATCCAGTACCAATTAAATAAGAA
            TCTCTGGGGAGGACCAAGCTGTCAGGATTTTTTTTTTTAATTCCCCAGATGATTCCAGTA
            TACAGATCAGTTCATCTAAGAACCAGTACCTTGGAAGAATACTACTCAGAATTTATTGTG

    64921   CGAATGAGAGGCATAAGACAGAGTGAAAGACTGAGGCAGGTTTCAGAGCAGGAGTGAATG
            TTTATTAAAAAGCTTTAGAACAGGAATGAAAGAAAGTAAAGTACACTTGGAAGAGGGTTA
            ACGGGGAGACTTGAGAGACCAAGTGCATGGTTTGACCTCTGACTTGGGGTTTTATGTGCT
            GGTGTGCTTCGGGGGTCTTACATTACTTCTCCACTGATTCTTCCATTGGGATGGACTGTC
            CATATGCACAGTGGCCTGTTAGTGCTTGTGAGGAGCCGCATGCACAGTGTGTTTACTGAA
            [G,A]
            TTGTATCCATGCTCACGTGAGGCATTCTTCCCTTACCAGTATTCGTAGAACCATATGCCA
            GTTAAACTCCACCATTTTGCCTCTTAGTGTGCATGCTTGAGCTCATTCACCCAGTTTCTG
            AGATATTGGGAAAATGCGATCACCAGTTTCAGGTTTTTCTATCCATTGGGAAACTGCCTT
            TCCCTGGCACTGGCTGCAACCAATTATTATTTTAGAGAGACAGTTTAATAATCGCCTATC
            ATCTGATGGTTGCCTGACATTTCTTGTGGTGGCAGCAGGGGGGACCCTCTCCTGTCCTGC

    64934   TAAGACAGAGTGAAAGACTGAGGCAGGTTTCAGAGCAGGAGTGAATGTTTATTAAAAAGC
            TTTAGAACAGGAATGAAAGAAAGTAAAGTACACTTGGAAGAGGGTTAACGGGGAGACTTG
            AGAGACCAAGTGCATGGTTTGACCTCTGACTTGGGGTTTTATGTGCTGGTGTGCTTCGGG
            GGTCTTACATTACTTCTCCACTGATTCTTCCATTGGGATGGACTGTCCATATGCACAGTG
            GCCTGTTAGTGCTTGTGAGGAGCCGCATGCACAGTGTGTTTACTGAAGTTGTATCCATGC
            [T,C]
            CACGTGAGGCATTCTTCCCTTACCAGTATTCGTAGAACCATATGCCAGTTAAACTCCACC
            ATTTTGCCTCTTAGTGTGCATGCTTGAGCTCATTCACCCAGTTTCTGAGATATTGGGAAA
            ATGCGATCACCAGTTTCAGGTTTTTCTATCCATTGGGAAACTGCCTTTCCCTGGCACTGG
            CTGCAACCAATTATTATTTTAGAGAGACAGTTTAATAATCGCCTATCATCTGATGGTTGC
            CTGACATTTCTTGTGGTGGCAGCAGGGGGGACCCTCTCCTGTCCTGCTCGTGTCTGACTA

    65150   GATGGACTGTCCATATGCACAGTGGCCTGTTAGTGCTTGTGAGGAGCCGCATGCACAGTG
            TGTTTACTGAAGTTGTATCCATGCTCACGTGAGGCATTCTTCCCTTACCAGTATTCGTAG
            AACCATATGCCAGTTAAACTCCACCATTTTGCCTCTTAGTGTGCATGCTTGAGCTCATTC
            ACCCAGTTTCTGAGATATTGGGAAAATGCGATCACCAGTTTCAGGTTTTTCTATCCATTG
            GGAAACTGCCTTTCCCTGGCACTGGCTGCAACCAATTATTATTTTAGAGAGACAGTTTAA
            [T,A]
            AATCGCCTATCATCTGATGGTTGCCTGACATTTCTTGTGGTGGCAGCAGGGGGGACCCTC
            TCCTGTCCTGCTCGTGTCTGACTAGCTACCTACTGTAATAAATGGGGTGCAGATTAGAAA
            ACAGGTCCTTACCCTCCCCCTTCCCCACCCAGTTATTGCTCAAGATCACATAATTATGAA
            ATAGAAGAGCTGATACATAGAGAAAAATAGTTCCAGTTGTCTTTATAAGTGGTTCAAAAC
            TCTGTGAGCTTCTTTGATGGGTTGAGTTGTAAGTTATGTGGCAGCCTCTCCTTTCAGGTG

    65198   GCATGCACAGTGTGTTTACTGAAGTTGTATCCATGCTCACGTGAGGCATTCTTCCCTTAC
            CAGTATTCGTAGAACCATATGCCAGTTAAACTCCACCATTTTGCCTCTTAGTGTGCATGC
            TTGAGCTCATTCACCCAGTTTCTGAGATATTGGGAAAATGCGATCACCAGTTTCAGGTTT
            TTCTATCCATTGGGAAACTGCCTTTCCCTGGCACTGGCTGCAACCAATTATTATTTTAGA
            GAGACAGTTTAATAATCGCCTATCATCTGATGGTTGCCTGACATTTCTTGTGGTGGCAGC
            [A,G]
            GGGGGGACCCTCTCCTGTCCTGCTCGTGTCTGACTAGCTACCTACTGTAATAAATGGGGT
            GCAGATTAGAAAACAGGTCCTTACCCTCCCCCTTCCCCACCCAGTTATTGCTCAAGATCA
            CATAATTATGAAATAGAAGAGCTGATACATAGAGAAAAATAGTTCCAGTTGTCTTTATAA
            GTGGTTCAAAACTCTGTGAGCTTCTTTGATGGGTTGAGTTGTAAGTTATGTGGCAGCCTC
            TCCTTTCAGGTGAGAATGAAGCAGTCAGCCAGGTCTAATTGCCTAGTTATATGAGTGTAC

    65674   TATAAGTGGTTCAAAACTCTGTGAGCTTCTTTGATGGGTTGAGTTGTAAGTTATGTGGCA
            GCCTCTCCTTTCAGGTGAGAATGAAGCAGTCAGCCAGGTCTAATTGCCTAGTTATATGAG
            TGTACTGAGTAGGTAACTCTCTCAATAGTTTAATTTGAGGTCTGCAATTGGAGAGTTGAT
            GCTGAAACATTTCTCAGGACCAGAAATTTCCTTTCAGGCTAGCCACTTCTCTGAGCTGAA
            AATGCTGTCATGGTGAATTCATTCTTCTAGATCCATGTTTTTTAAGTATATTATCAAAGG
            [A,T]
```

```
      CTATGTGTATCGGAATCCCTTGAGACTCTAGTTAATGACTGTCCACGTCCCACTCCCAGA
      GATTCCGAGTCAGTAAATCTGGGGTGGGGCTCAGGAAGTGGTTTTTTGTTGTTGTTGCTG
      CTTTGTTTTGTTTTTGAGATGGAGTTTTACTCTGTTGCCCAGGCTGGAATGCAGTGGCGT
      GATCTTGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTC
      CCAAGTAGCTGGGATTACAGGTGCCCACCAGCATGCCAGGCTAATTTTTATATTTTTAGT

65720 TAAGTTATGTGGCAGCCTCTCCTTTCAGGTGAGAATGAAGCAGTCAGCCAGGTCTAATTG
      CCTAGTTATATGAGTGTACTGAGTAGGTAACTCTCTCAATAGTTTAATTTGAGGTCTGCA
      ATTGGAGAGTTGATGCTGAAACATTTCTCAGGACCAGAAATTTCCTTTCAGGCTAGCCAC
      TTCTCTGAGCTGAAAATGCTGTCATGGTGAATTCATTCTTCTAGATCCATGTTTTTTAAG
      TATATTATCAAAGGACTATGTGTATCGGAATCCCTTGAGACTCTAGTTAATGACTGTCCA
      [C,G]
      GTCCCACTCCCAGAGATTCCGAGTCAGTAAATCTGGGGTGGGGCTCAGGAAGTGGTTTTT
      TGTTGTTGTTGCTGCTTTGTTTTGTTTTTGAGATGGAGTTTTACTCTGTTGCCCAGGCTG
      GAATGCAGTGGCGTGATCTTGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCGATTCT
      CCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGCCCACCAGCATGCCAGGCTAATT
      TTTATATTTTTAGTAGAGACGGGGTTCCCCCATGTTGGCCAGGCTGGTCACAAACTGCTG

65820 AGTTTAATTTGAGGTCTGCAATTGGAGAGTTGATGCTGAAACATTTCTCAGGACCAGAAA
      TTTCCTTTCAGGCTAGCCACTTCTCTGAGCTGAAAATGCTGTCATGGTGAATTCATTCTT
      CTAGATCCATGTTTTTTAAGTATATTATCAAAGGACTATGTGTATCGGAATCCCTTGAGA
      CTCTAGTTAATGACTGTCCACGTCCCACTCCCAGAGATTCCGAGTCAGTAAATCTGGGGT
      GGGGCTCAGGAAGTGGTTTTTTGTTGTTGTTGCTGCTTTGTTTTGTTTTTGAGATGGAGT
      [T,C]
      TTACTCTGTTGCCCAGGCTGGAATGCAGTGGCGTGATCTTGGCTCACTGCAACCTCTGCC
      TCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGCCC
      ACCAGCATGCCAGGCTAATTTTTATATTTTTAGTAGAGACGGGGTTCCCCCATGTTGGCC
      AGGCTGGTCACAAACTGCTGACCTCACATGATCTGCCCACCTCAGCCTCCCAAAGTGCTG
      GAATTACAGGCATGAGCCACTGCACCTGGCCAGGAAGTGGCATTTTTCAGAAAACTCATC

65948 ATGTTTTTTAAGTATATTATCAAAGGACTATGTGTATCGGAATCCCTTGAGACTCTAGTT
      AATGACTGTCCACGTCCCACTCCCAGAGATTCCGAGTCAGTAAATCTGGGGTGGGGCTCA
      GGAAGTGGTTTTTTGTTGTTGTTGCTGCTTTGTTTTGTTTTTGAGATGGAGTTTTACTCT
      GTTGCCCAGGCTGGAATGCAGTGGCGTGATCTTGGCTCACTGCAACCTCTGCCTCCCAGG
      TTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGCCCACCAGCA
      [T,C]
      GCCAGGCTAATTTTTATATTTTTAGTAGAGACGGGGTTCCCCCATGTTGGCCAGGCTGGT
      CACAAACTGCTGACCTCACATGATCTGCCCACCTCAGCCTCCCAAAGTGCTGGAATTACA
      GGCATGAGCCACTGCACCTGGCCAGGAAGTGGCATTTTTCAGAAAACTCATCCAAGTGAT
      TTTGATGCAGGTAGTAGGCCAGATGCAGAGAAATATGATATAAAGGTAAATGTCCTTTCT
      TCCCTGTCTACTAGTATAGTGACCATTTTCTCCTGAATCAAATACTGCAGCCTTGAAACT

65978 TGTGTATCGGAATCCCTTGAGACTCTAGTTAATGACTGTCCACGTCCCACTCCCAGAGAT
      TCCGAGTCAGTAAATCTGGGGTGGGGCTCAGGAAGTGGTTTTTTGTTGTTGTTGCTGCTT
      TGTTTTGTTTTTGAGATGGAGTTTTACTCTGTTGCCCAGGCTGGAATGCAGTGGCGTGAT
      CTTGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCA
      AGTAGCTGGGATTACAGGTGCCCACCAGCATGCCAGGCTAATTTTTATATTTTTAGTAGA
      [G,A]
      ACGGGGTTCCCCCATGTTGGCCAGGCTGGTCACAAACTGCTGACCTCACATGATCTGCCC
      ACCTCAGCCTCCCAAAGTGCTGGAATTACAGGCATGAGCCACTGCACCTGGCCAGGAAGT
      GGCATTTTTCAGAAAACTCATCCAAGTGATTTTGATGCAGGTAGTAGGCCAGATGCAGAG
      AAATATGATATAAAGGTAAATGTCCTTTCTTCCCTGTCTACTAGTATAGTGACCATTTTC
      TCCTGAATCAAATACTGCAGCCTTGAAACTAGTTAAAACCAGGGTTGTGCCATACTTCTA

65988 AATCCCTTGAGACTCTAGTTAATGACTGTCCACGTCCCACTCCCAGAGATTCCGAGTCAG
      TAAATCTGGGGTGGGGCTCAGGAAGTGGTTTTTTGTTGTTGTTGCTGCTTTGTTTTGTTT
      TTGAGATGGAGTTTTACTCTGTTGCCCAGGCTGGAATGCAGTGGCGTGATCTTGGCTCAC
      TGCAACCTCTGCCTCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGG
      ATTACAGGTGCCCACCAGCATGCCAGGCTAATTTTTATATTTTTAGTAGAGACGGGGTTC
      [C,T]
      CCCATGTTGGCCAGGCTGGTCACAAACTGCTGACCTCACATGATCTGCCCACCTCAGCCT
      CCCAAAGTGCTGGAATTACAGGCATGAGCCACTGCACCTGGCCAGGAAGTGGCATTTTTC
      AGAAAACTCATCCAAGTGATTTTGATGCAGGTAGTAGGCCAGATGCAGAGAAATATGATA
      TAAAGGTAAATGTCCTTTCTTCCCTGTCTACTAGTATAGTGACCATTTTCTCCTGAATCA
      AATACTGCAGCCTTGAAACTAGTTAAAACCAGGGTTGTGCCATACTTCTACTCAGCTCAG

66089 TTGCTGCTTTGTTTTGTTTTTGAGATGGAGTTTTACTCTGTTGCCCAGGCTGGAATGCAG
      TGGCGTGATCTTGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCGATTCTCCTGCCTC
      AGCCTCCCAAGTAGCTGGGATTACAGGTGCCCACCAGCATGCCAGGCTAATTTTTATATT
      TTTAGTAGAGACGGGGTTCCCCCATGTTGGCCAGGCTGGTCACAAACTGCTGACCTCACA
      TGATCTGCCCACCTCAGCCTCCCAAAGTGCTGGAATTACAGGCATGAGCCACTGCACCTG
```

```
          [G,T]
          CCAGGAAGTGGCATTTTTCAGAAAACTCATCCAAGTGATTTTGATGCAGGTAGTAGGCCA
          GATGCAGAGAAATATGATATAAAGGTAAATGTCCTTTCTTCCCTGTCTACTAGTATAGTG
          ACCATTTTCTCCTGAATCAAATACTGCAGCCTTGAAACTAGTTAAAACCAGGGTTGTGCC
          ATACTTCTACTCAGCTCAGAAGGAGGCTCTCCATTTGAGAACACATGGGTTCCTTTTGCT
          ACCAGGACATGCAGCTTGGAACCTCTGATTCTCAGTGATGTAGGCATTTTCTTAGCATAC

  66332   TCTGCCCACCTCAGCCTCCCAAAGTGCTGGAATTACAGGCATGAGCCACTGCACCTGGCC
          AGGAAGTGGCATTTTTCAGAAAACTCATCCAAGTGATTTTGATGCAGGTAGTAGGCCAGA
          TGCAGAGAAATATGATATAAAGGTAAATGTCCTTTCTTCCCTGTCTACTAGTATAGTGAC
          CATTTTCTCCTGAATCAAATACTGCAGCCTTGAAACTAGTTAAAACCAGGGTTGTGCCAT
          ACTTCTACTCAGCTCAGAAGGAGGCTCTCCATTTGAGAACACATGGGTTCCTTTTGCTAC
          [C,T]
          AGGACATGCAGCTTGGAACCTCTGATTCTCAGTGATGTAGGCATTTTCTTAGCATACAGC
          AGCCTGGAATTTATCATAATGTACATGTCACAGGAGGATATGAAATAGAGTAAACACCTT
          TTTTATAGACTTTAGATTTTGAGGTCTCACTACAGCAGCGTTTTGCAACTTTTTAAAAAA
          GAACCAATAATGATCTCTTTGGATGTTCATAAAAGCCTCACACTCTGCTGTCCCATACTA
          GATTCTGATATACCTAACTTTGAAGGATGTCCACCATTGAGTGTCACTACATACAGGGAG

  66361   GAATTACAGGCATGAGCCACTGCACCTGGCCAGGAAGTGGCATTTTTCAGAAAACTCATC
          CAAGTGATTTTGATGCAGGTAGTAGGCCAGATGCAGAGAAATATGATATAAAGGTAAATG
          TCCTTTCTTCCCTGTCTACTAGTATAGTGACCATTTTCTCCTGAATCAAATACTGCAGCC
          TTGAAACTAGTTAAAACCAGGGTTGTGCCATACTTCTACTCAGCTCAGAAGGAGGCTCTC
          CATTTGAGAACACATGGGTTCCTTTTGCTACCAGGACATGCAGCTTGGAACCTCTGATTC
          [T,G]
          CAGTGATGTAGGCATTTTCTTAGCATACAGCAGCCTGGAATTTATCATAATGTACATGTC
          ACAGGAGGATATGAAATAGAGTAAACACCTTTTTTATAGACTTTAGATTTTGAGGTCTCA
          CTACAGCAGCGTTTTGCAACTTTTTAAAAAAGAACCAATAATGATCTCTTTGGATGTTCA
          TAAAAGCCTCACACTCTGCTGTCCCATACTAGATTCTGATATACCTAACTTTGAAGGATG
          TCCACCATTGAGTGTCACTACATACAGGGAGCAAATTCCATTTCATTTTTCGCGCATTCC

  67130   CTCCTGGCAGGTATTTTCCCCCTTCCTTATTCCACTAAGACTCACTTGCAACGCAAAGAC
          CAGGGCCTCATGGAAGAAGGCAGCTGGGCACAAGCCTGTTGCCATGGAAAGCTTAGGGCG
          GGAAGCGATTGATTGGTCTCTGCATACAGAGACTGATCTAGAAGGCTTCAGTGTGTCTGA
          ATGGACCTGTCTGGGCTGGAATTTCAGTCAGTCTGACAGACTGCTAAAGGAGACTCAGGT
          GTACACTTCAGCAACTTGATAACTCTTCCCCAGCTGAAAGTCGAATCATTTGATCCAACG
          [G,A]
          GAAAGAAGCTAAAATTGTCCTGACAGCTAAAGAGCGATCTGACCTTTGTGATCAGGAGGA
          GAATTTCTTGTGATACAGAAAGTGAAAGTAGAAACTGGAATGATGGTATTGATGATGAAG
          GCATTTAGAGCAGCAGGCACTGCCATTCATTAAAAGATTGCACTGTGTCAGGCACATGCT
          TTATCCTATTGAACCATCATGCCAAACTTGGGACACTTAGGTATCATTGTTTTTCATTTT
          CCATTAAGAACTTGAGGATTAAAGCTGTTAATCTATCTGTTCATGGTGAAATGAGTAGTA

  67148   CCCCTTCCTTATTCCACTAAGACTCACTTGCAACGCAAAGACCAGGGCCTCATGGAAGAA
          GGCAGCTGGGCACAAGCCTGTTGCCATGGAAAGCTTAGGGCGGGAAGCGATTGATTGGTC
          TCTGCATACAGAGACTGATCTAGAAGGCTTCAGTGTGTCTGAATGGACCTGTCTGGGCTG
          GAATTTCAGTCAGTCTGACAGACTGCTAAAGGAGACTCAGGTGTACACTTCAGCAACTTG
          ATAACTCTTCCCCAGCTGAAAGTCGAATCATTTGATCCAACGGGAAAGAAGCTAAAATTG
          [T,C]
          CCTGACAGCTAAAGAGCGATCTGACCTTTGTGATCAGGAGGAGAATTTCTTGTGATACAG
          AAAGTGAAAGTAGAAACTGGAATGATGGTATTGATGATGAAGGCATTTAGAGCAGCAGGC
          ACTGCCATTCATTAAAAGATTGCACTGTGTCAGGCACATGCTTTATCCTATTGAACCATC
          ATGCCAAACTTGGGACACTTAGGTATCATTGTTTTTCATTTTCCATTAAGAACTTGAGGA
          TTAAAGCTGTTAATCTATCTGTTCATGGTGAAATGAGTAGTATGTGGCCTGGGTTTGAAC

  67541   GATGATGAAGGCATTTAGAGCAGCAGGCACTGCCATTCATTAAAAGATTGCACTGTGTCA
          GGCACATGCTTTATCCTATTGAACCATCATGCCAAACTTGGGACACTTAGGTATCATTGT
          TTTTCATTTTCCATTAAGAACTTGAGGATTAAAGCTGTTAATCTATCTGTTCATGGTGAA
          ATGAGTAGTATGTGGCCTGGGTTTGAACCTTTGTTATAGCTGCAATTTTTTCAGAGCTTT
          TAATTGTTGAACTACACGGTGTTTCTGGGGCTATTCTTGATCTTTGCACAGTGTGGGGGC
          [G,T]
          AAAGTTGGTCCTTTTAGGAATTCAACTATTCTCTCATTTAGTTATGGCCAAGAAAGGAGA
          GGCTCAGAGATCAGTTGGTGCCTCAAAAAGGTCGCTCTTCCCTGCAGCCGACTTAATATGT
          CTCCTAGCTCCCAGTCCAGTGCTCCAGCAAGATCCGGAAGCTAAATATTCCCTGAAGCCT
          TTATAATCTATTGAGAATACACAACAGAGTTGCTGGGAGTTTTTCCAAGGCAGTAAGTCT
          CATTTTTCTTATTAGTTTGGATCCCCTGAACCCTTAAGGTAGTATCTCAAATGCAGTTAA

  67608   GCTTTATCCTATTGAACCATCATGCCAAACTTGGGACACTTAGGTATCATTGTTTTTCAT
          TTTCCATTAAGAACTTGAGGATTAAAGCTGTTAATCTATCTGTTCATGGTGAAATGAGTA
          GTATGTGGCCTGGGTTTGAACCTTTGTTATAGCTGCAATTTTTTTCAGAGCTTTTAATTGT
          TGAACTACACGGTGTTTCTGGGGCTATTCTTGATCTTTGCACAGTGTGGGGGCGAAAGTT
```

```
GGTCCTTTTAGGAATTCAACTATTCTCTCATTTAGTTATGGCCAAGAAAGGAGAGGCTCA
[G,A]
AGATCAGTTGGTGCCTCAAAAGGTCGCTCTTCCCTGCAGCCGACTTAATATGTCTCCTAG
CTCCCAGTCCAGTGCTCCAGCAAGATCCGGAAGCTAAATATTCCCTGAAGCCTTTATAAT
CTATTGAGAATACACAACAGAGTTGCTGGGAGTTTTTCCAAGGCAGTAAGTCTCATTTTT
CTTATTAGTTTGGATCCCCTGAACCCTTAAGGTAGTATCTCAAATGCAGTTAAGTGTTCA
ACCAATATTTGTTGCAAGAATAAACATTACTAGTAAGAAATGTGATCTTGGAGACAATAT
```

67670
```
TCCATTAAGAACTTGAGGATTAAAGCTGTTAATCTATCTGTTCATGGTGAAATGAGTAGT
ATGTGGCCTGGGTTTGAACCTTTGTTATAGCTGCAATTTTTTCAGAGCTTTTAATTGTTG
AACTACACGGTGTTTCTGGGGCTATTCTTGATCTTTGCACAGTGTGGGGGCGAAAGTTGG
TCCTTTTAGGAATTCAACTATTCTCTCATTTAGTTATGGCCAAGAAAGGAGAGGCTCAGA
GATCAGTTGGTGCCTCAAAAGGTCGCTCTTCCCTGCAGCCGACTTAATATGTCTCCTAGC
[T,C]
CCCAGTCCAGTGCTCCAGCAAGATCCGGAAGCTAAATATTCCCTGAAGCCTTTATAATCT
ATTGAGAATACACAACAGAGTTGCTGGGAGTTTTTCCAAGGCAGTAAGTCTCATTTTTCT
TATTAGTTTGGATCCCCTGAACCCTTAAGGTAGTATCTCAAATGCAGTTAAGTGTTCAAC
CAATATTTGTTGCAAGAATAAACATTACTAGTAAGAAATGTGATCTTGGAGACAATATTT
TATGTTCCTAGTCTCTAGTTTTCCTATTTTTGAAATAAGCAGGTGTGTTCTAGATATTTC
```

70638
```
GACATTGCCAGCCTTCTTTCCCTTTCCGGGACCTTGGAAACCCTGTCCATTGGTAACCAG
TTTGATGGCTAAGCTCCATTTTTCCATCATGTTTCCTAGACAACGCCATGCAAGCTTCTG
CTCCAGCCCCTTTGGAGCTCTGATTCAGACACTAATCTCAGGCCCTCCAAGGAAGCATCA
TTCAGACCTTCCCTGCTTCCTGCAGAGGCACATGTAGTACAGTACGTGAGGCTTTCTATG
GAGCTGCTCTCATTTTTGTTCATTAACTTCTCTCCCTGGGAGGAGGCATGCCAGGGAGGG
[C,T]
GTTTATCAAGATGAGGCACATGACAATAGGAGCACCAGATTTCCAGTCCCTGTTTTGTTA
TCAGAAGTTCGCTTTCCAGACTTGGGCAAATCACTTTAATGTCTCTTGCTTAAAACCTTG
ACTAGCTTTTCAATGTTTTTGGGGACAAGGACTCAAGGCCTTAGAGATCTTGTGATCTCT
CTACATGTGTAATAAATATATAAACCATAATATAGCTGCTTATTATCAAGTATCATGCAC
TGTACATGACTGTATGTGCTATACTTTTATATGCAACTGGCAGCACAGTAGGTTTCTTTA
```

70767
```
CTTTGGAGCTCTGATTCAGACACTAATCTCAGGCCCTCCAAGGAAGCATCATTCAGACCT
TCCCTGCTTCCTGCAGAGGCACATGTAGTACAGTACGTGAGGCTTTCTATGGAGCTGCTC
TCATTTTTGTTCATTAACTTCTCTCCCTGGGAGGAGGCATGCCAGGGAGGGCGTTTATCA
AGATGAGGCACATGACAATAGGAGCACCAGATTTCCAGTCCCTGTTTTGTTATCAGAAGT
TCGCTTTCCAGACTTGGGCAAATCACTTTAATGTCTCTTGCTTAAAACCTTGACTAGCTT
[T,C]
TCAATGTTTTTGGGGACAAGGACTCAAGGCCTTAGAGATCTTGTGATCTCTCTACATGTG
TAATAAATATATAAACCATAATATAGCTGCTTATTATCAAGTATCATGCACTGTACATGA
CTGTATGTGCTATACTTTTATATGCAACTGGCAGCACAGTAGGTTTCTTTAAAACCAGCAT
CAACACAAACACATTAGTAATGCATTGTGTTACAACATTACCATGGCAGAGATATTACTA
GACAATAGGAATTTTTCAGCTCTATTATAATCTTATGGGACCACCATCATATAAGCAGGT
```

71275
```
TGTTACAACATTACCATGGCAGAGATATTACTAGACAATAGGAATTTTTCAGCTCTATTA
TAATCTTATGGGACCACCATCATATAAGCAGGTCATTGTTAACCAAAACATCATTACATG
GTACATGACTATATTTTGGTATAATTTTATACAAAAAAAAATTGCCTGACTTTTGCCTAC
CTACCCAGCTCCTACTTCCTTGAGTTCACTCCTTTGTGCACTCCAACCCCACTCACCTAT
CTGTTATCCTTCTGACACACCCTATTGCCTCCTTCCATTTGGCTTTATCCTACAAAGTTT
[G,A]
CTGTTTACAAAGTTTACTCTGAAATAGAGGTCATCATTTTGAAGACTAGAAAACCAAGGC
ACAGAGACTTACATGCCTTGCCCAAGTTTGCATAGTTTGTAAATGGAAAAGCTGGGGAAA
ATCCACGGAAACTTGGCTCTGGATTCCATGCTATTGACCAACTCCTGACTTCCTGCCCTG
CTAGACCTTAGTGGGTGGTCATGAAATAAAGGATGTAGGAACAGTGTGCCAAGAGTTCTG
TTGGATTATTTTAGCTGAAATCTCATAATGGCTTTTTATAGAATATTAATGACTTACAGA
```

71401
```
GACTATATTTTGGTATAATTTTATACAAAAAAAAATTGCCTGACTTTTGCCTACCTACCC
AGCTCCTACTTCCTTGAGTTCACTCCTTTGTGCACTCCAACCCCACTCACCTATCTGTTA
TCCTTCTGACACACCCTATTGCCTCCTTCCATTTGGCTTTATCCTACAAAGTTTGCTGTT
TACAAAGTTTACTCTGAAATAGAGGTCATCATTTTGAAGACTAGAAAACCAAGGCACAGA
GACTTACATGCCTTGCCCAAGTTTGCATAGTTTGTAAATGGAAAAGCTGGGGAAAATCCA
[C,A]
GGAAACTTGGCTCTGGATTCCATGCTATTGACCAACTCCTGACTTCCTGCCCTGCTAGAC
CTTAGTGGGTGGTCATGAAATAAAGGATGTAGGAACAGTGTGCCAAGAGTTCTGTTGGAT
TATTTTAGCTGAAATCTCATAATGGCTTTTTATAGAATATTAATGACTTACAGAGCTCTT
TGCTCTGGGTTATGGACTTAGGTTTCTAAATTGTCATCTCCTTCTAGATAACTTTTCAGG
AACTTATCAGCACCCACACAGGACTGGATGTGCTTTTGGAAGGTACCATGGAGGCTGATA
```

71656
```
CCCAAGTTTGCATAGTTTGTAAATGGAAAAGCTGGGGAAAATCCACGGAAACTTGGCTCT
GGATTCCATGCTATTGACCAACTCCTGACTTCCTGCCCTGCTAGACCTTAGTGGGTGGTC
ATGAAATAAAGGATGTAGGAACAGTGTGCCAAGAGTTCTGTTGGATTATTTTAGCTGAAA
```

```
          TCTCATAATGGCTTTTTATAGAATATTAATGACTTACAGAGCTCTTTGCTCTGGGTTATG
          GACTTAGGTTTCTAAATTGTCATCTCCTTCTAGATAACTTTTCAGGAACTTATCAGCACC
          [C,T]
          ACACAGGACTGGATGTGCTTTTGGAAGGTACCATGGAGGCTGATATGGTGTGTGGCTATATC
          AAATCTCATCTTGAATTGTAGCTCCCATAACCCCCACGTGTCAAGGGAGGGACCAGGTGG
          GAGGTAATTAAATCATGGGTGTGTGTTTTTCCGTGCTGTCCTCGTGACAGTGAATAAGTC
          TCATGAGATCTGATGGTTTTATAAAGGGCAGTTCCCTGCACATGCTTTCTTGCCTGCCA
          CCATGTAAGAAGTGCCTTTGCTCTTCTACCATGATTGTGAGGCCTCCCTAGCTGTGTGCA

71969     ATGTGCTTTTGGAAGGTACCATGGAGGCTGATATGGTGTGTGGCTATATCAAATCTCATCTT
          GAATTGTAGCTCCCATAACCCCCACGTGTCAAGGGAGGGACCAGGTGGGGAGGTAATTAAA
          TCATGGGTGTGTGTTTTTCCGTGCTGTCCTCGTGACAGTGAATAAGTCTCATGAGATCTG
          ATGGTTTTATAAAGGGCAGTTCCCCTGCACATGCTTTCTTGCCTGCCACCATGTAAGAAG
          TGCCTTTGCTCTTCTACCATGATTGTGAGGCCTCCCTAGCTGTGTGCAACTGTGAGTCTA
          [C,T]
          TTAACCTCTTTTTTCTTTATAAACTACTCAGTCTTGGGTGTGCTTTTATTAGCAGCATGAC
          AACAGACTAGTCTAATACAGAGGCTTTGGGCATAAGCTATGGGCCTTTGGTTTTGAGGTT
          CTCCAATATTCAGCTGGGAAATTATGTACCACTAAGATGAGTTTTGGAGAAGCCTCCTTG
          AGAGTAATTAAACCAGAGCAGCAAAACAATAGACTCCTACCTGTATGGAAAGGACAGAGT
          CACAAGTCAAAGCTTCAGGCTGAACCTTTCTTAGCAAAGTGAGAAGGGTAGATCTGAGAC

72194     CCACCATGTAAGAAGTGCCTTTGCTCTTCTACCATGATTGTGAGGCCTCCCTAGCTGTGT
          GCAACTGTGAGTCTACTTAACCTCTTTTTTCTTTATAAACTACTCAGTCTTGGGTGTGCTT
          TTATTAGCAGCATGACAACAGACTAGTCTAATACAGAGGCTTTGGGCATAAGCTATGGGC
          CTTTGGTTTTGAGGTTCTCCAATATTCAGCTGGGAAATTATGTACCACTAAGATGAGTTT
          TGGAGAAGCCTCCTTGAGAGTAATTAAACCAGAGCAGCAAAACAATAGACTCCTACCTGT
          [A,G]
          TGGAAAGGACAGAGTCACAAGTCAAAGCTTCAGGCTGAACCTTTCTTAGCAAAGTGAGAA
          GGGTAGATCTGAGACAAAGGAGCAGGGATTTTTTTTTAGGTTGATTCCTGTATTTATGTAA
          CTTCTTTCTCCTCAACAGTACAGGTTTCTTCATGATACATGTCTTCAAGACAGCATTGGA
          GTAAAGGATTCTCAGTGGCCTTGTTTTATTCAATGGCATTTAGTAAACGTGGGGAAGGGA
          TCAAGAGTCCACATCAGATCCTGGCCCTGGAGCAGCTTTTCTAGTCGGGGGTCATGATAG

72292     CTACTCAGTCTTGGGTGTGCTTTTATTAGCAGCATGACAACAGACTAGTCTAATACAGAG
          GCTTTGGGCATAAGCTATGGGCCTTTGGTTTTGAGGTTCTCCAATATTCAGCTGGGAAAT
          TATGTACCACTAAGATGAGTTTTGGAGAAGCCTCCTTGAGAGTAATTAAACCAGAGCAGC
          AAAACAATAGACTCCTACCTGTATGGAAAGGACAGAGTCACAAGTCAAAGCTTCAGGCTG
          AACCTTTCTTAGCAAAGTGAGAAGGGTAGATCTGAGACAAAGGAGCAGGGATTTTTTTTA
          [A,G]
          GTTGATTCCTGTATTTATGTAACTTCTTTCTCCTCAACAGTACAGGTTTCTTCATGATAC
          ATGTCTTCAAGACAGCATTGGAGTAAAGGATTCTCAGTGGCCTTGTTTTATTCAATGGCA
          TTTAGTAAACGTGGGGAAGGGATCAAGAGTCCACATCAGATCCTGGCCCTGGAGCAGCTT
          TTCTAGTCGGGGGTCATGATAGCTACAGTCTCTCTAGTATCTTCTCTGTGCCATTTAAAT
          AAATAAATCAGAGAATTGGACTCAGAATCTGATTCTCTGATTCCGCTGAGTCAGTTCTTG

72351     GGCTTTGGGCATAAGCTATGGGCCTTTGGTTTTGAGGTTCTCCAATATTCAGCTGGGAAA
          TTATGTACCACTAAGATGAGTTTTGGAGAAGCCTCCTTGAGAGTAATTAAACCAGAGCAG
          CAAAACAATAGACTCCTACCTGTATGGAAAGGACAGAGTCACAAGTCAAAGCTTCAGGCT
          GAACCTTTCTTAGCAAAGTGAGAAGGGTAGATCTGAGACAAAGGAGCAGGGATTTTTTTT
          AGGTTGATTCCTGTATTTATGTAACTTCTTTCTCCTCAACAGTACAGGTTTCTTCATGAT
          [A,G]
          CATGTCTTCAAGACAGCATTGGAGTAAAGGATTCTCAGTGGCCTTGTTTTATTCAATGGC
          ATTTAGTAAACGTGGGGAAGGGATCAAGAGTCCACATCAGATCCTGGCCCTGGAGCAGCT
          TTTCTAGTCGGGGGTCATGATAGCTACAGTCTCTCTAGTATCTTCTCTGTGCCATTTAAA
          TAAATAAATCAGAGAATTGGACTCAGAATCTGATTCTCTGATTCCGCTGAGTCAGTTCTT
          GGCCAGGGTCATGAAACTGGTAACTTGTACAGCCTGGACCCGTACTCAAGGATGTGAGAC

72382     TTGAGGTTCTCCAATATTCAGCTGGGAAATTATGTACCACTAAGATGAGTTTTGGAGAAG
          CCTCCTTGAGAGTAATTAAACCAGAGCAGCAAAACAATAGACTCCTACCTGTATGGAAAG
          GACAGAGTCACAAGTCAAAGCTTCAGGCTGAACCTTTCTTAGCAAAGTGAGAAGGGTAGA
          TCTGAGACAAAGGAGCAGGGATTTTTTTTAGGTTGATTCCTGTATTTATGTAACTTCTTT
          CTCCTCAACAGTACAGGTTTCTTCATGATACATGTCTTCAAGACAGCATTGGAGTAAAGG
          [A,C]
          TTCTCAGTGGCCTTGTTTTATTCAATGGCATTTAGTAAACGTGGGGAAGGGATCAAGAGT
          CCACATCAGATCCTGGCCCTGGAGCAGCTTTTCTAGTCGGGGGTCATGATAGCTACAGTC
          TCTCTAGTATCTTCTCTGTGCCATTTAAATAAATAAATCAGAGAATTGGACTCAGAATCT
          GATTCTCTGATTCCGCTGAGTCAGTTCTTGGCCAGGGTCATGAAACTGGTAACTTGTACA
          GCCTGGACCCGTACTCAAGGATGTGAGACTTGGAGTGGGGGTTGAGAGGAGGACAGTTCA

72424     AGATGAGTTTTGGAGAAGCCTCCTTGAGAGTAATTAAACCAGAGCAGCAAAACAATAGAC
          TCCTACCTGTATGGAAAGGACAGAGTCACAAGTCAAAGCTTCAGGCTGAACCTTTCTTAG
```

<div align="center">FIGURE 3, page 89 of 122</div>

```
         CAAAGTGAGAAGGGTAGATCTGAGACAAAGGAGCAGGGATTTTTTTTAGGTTGATTCCTG
         TATTTATGTAACTTCTTTCTCCTCAACAGTACAGGTTTCTTCATGATACATGTCTTCAAG
         ACAGCATTGGAGTAAAGGATTCTCAGTGGCCTTGTTTTATTCAATGGCATTTAGTAAACG
         [G,T]
         GGGGAAGGGATCAAGAGTCCACATCAGATCCTGGCCCTGGAGCAGCTTTTCTAGTCGGGG
         GTCATGATAGCTACAGTCTCTCTAGTATCTTCTCTGTGCCATTTAAATAAATAAATCAGA
         GAATTGGACTCAGAATCTGATTCTCTGATTCCGCTGAGTCAGTTCTTGGCCAGGGTCATG
         AAACTGGTAACTTGTACAGCCTGGACCCGTACTCAAGGATGTGAGACTTGGAGTGGGGGT
         TGAGAGGAGGACAGTTCATGACAAGCCTGACCCAACATAGTGCTGTGCCCAATTAGCTAG

72466    AGCAGCAAAACAATAGACTCCTACCTGTATGGAAAGGACAGAGTCACAAGTCAAAGCTTC
         AGGCTGAACCTTTCTTAGCAAAGTGAGAAGGGTAGATCTGAGACAAAGGAGCAGGGATTT
         TTTTTAGGTTGATTCCTGTATTTATGTAACTTCTTTCTCCTCAACAGTACAGGTTTCTTC
         ATGATACATGTCTTCAAGACAGCATTGGAGTAAAGGATTCTCAGTGGCCTTGTTTTATTC
         AATGGCATTTAGTAAACGTGGGGAAGGGATCAAGAGTCCACATCAGATCCTGGCCCTGGA
         [G,A]
         CAGCTTTTCTAGTCGGGGGTCATGATAGCTACAGTCTCTCTAGTATCTTCTCTGTGCCAT
         TTAAATAAATAAATCAGAGAATTGGACTCAGAATCTGATTCTCTGATTCCGCTGAGTCAG
         TTCTTGGCCAGGGTCATGAAACTGGTAACTTGTACAGCCTGGACCCGTACTCAAGGATGT
         GAGACTTGGAGTGGGGGTTGAGAGGAGGACAGTTCATGACAAGCCTGACCCAACATAGTG
         CTGTGCCCAATTAGCTAGCTACACAGATAAGCAAACTGAGGCTACCACTGGGTCAGTTCT

72829    AAATAAATAAATCAGAGAATTGGACTCAGAATCTGATTCTCTGATTCCGCTGAGTCAGTT
         CTTGGCCAGGGTCATGAAACTGGTAACTTGTACAGCCTGGACCCGTACTCAAGGATGTGA
         GACTTGGAGTGGGGGTTGAGAGGAGGACAGTTCATGACAAGCCTGACCCAACATAGTGCT
         GTGCCCAATTAGCTAGCTACACAGATAAGCAAACTGAGGCTACCACTGGGTCAGTTCTTG
         GCAAGGGTCAGGAAGCTGTAACTTGTAGAGCCTGGACAAGTGTCTGTGATGTCAAACCCC
         [G,A]
         TCCATGTAACTGCTAGTTACTATATGGGAACTCAAGTTTATTACTTAACTGTATTAAGCT
         TCCATTTTCTCTAAGAAATGGGGGAAAAAAAGCTTTTACCTTGGCTTAAAGCAGTTGCAA
         GAATTAAAAAGTTAATTCATGTTGTTTATTTATCAGAATGCCTAGCACATTATAAGTCTC
         AGTATAGGAGAATTGTATTATTCTTACCATCATCACCATCACCACCATTATTTGCCAAGA
         GAGAGGTATATGCAAAGTGCTATAGTGGTTCAAAGGAGGGGGCAATCGCTTCCACCAGGA

72913    AACTTGTACAGCCTGGACCCGTACTCAAGGATGTGAGACTTGGAGTGGGGGTTGAGAGGA
         GGACAGTTCATGACAAGCCTGACCCAACATAGTGCTGTGCCCAATTAGCTAGCTACACAG
         ATAAGCAAACTGAGGCTACCACTGGGTCAGTTCTTGGCAAGGGTCAGGAAGCTGTAACTT
         GTAGAGCCTGGACAAGTGTCTGTGATGTCAAACCCCGTCCATGTAACTGCTAGTTACTAT
         ATGGGAACTCAAGTTTATTACTTAACTGTATTAAGCTTCCATTTTCTCTAAGAAATGGGG
         [G,-]
         AAAAAAAGCTTTTACCTTGGCTTAAAGCAGTTGCAAGAATTAAAAAGTTAATTCATGTTG
         TTTATTTATCAGAATGCCTAGCACATTATAAGTCTCAGTATAGGAGAATTGTATTATTCT
         TACCATCATCACCATCACCACCATTATTTGCCAAGAGAGAGGTATATGCAAAGTGCTATA
         GTGGTTCAAAGGAGGGGGCAATCGCTTCCACCAGGAAGACAGTGGAGGGTAGTGTGAGGA
         TAAATGTAAAACCTGAAAATTTAAACTTGAACTTGAAAGGAGACTGTGTATGTGGGAATT

73395    TGGTTCAAAGGAGGGGGCAATCGCTTCCACCAGGAAGACAGTGGAGGGTAGTGTGAGGAT
         AAATGTAAAACCTGAAAATTTAAACTTGAACTTGAAAGGAGACTGTGTATGTGGGAATTT
         TGGATCAAAAGGGGATTCCAATAGAAGAAACAGCTGAGTTAAAGCAAAGCGATAGAACAC
         TGATAACGACTATGAATGGTGAATAGAGCATTTTGGCTGATTGCTGTGTACCTAAATGGA
         GATGAGGGTGGAAAGATGCATTGGGGGGTAAGACTTTGAGAACCAAGTTCATTTGAGAAC
         [C,G]
         AAGTTCATTTGAGAACAACTACGAATGGTGAATAGAGCATTTTGGCTGATTGCTGTGTAC
         CTAAATGGAGGTGAGGGTGGAAAGATGCATTGGGGGATAACTATGAGAACCAAGTTAAGG
         GAAGTGTCATGAGCAGAGCTATGCTCCAAAAAGATTTAGCAGGCCATCTATACCCATTAT
         GTCTGGGGTGCATATGAGGGAGTTACAGGATGTGAGACTTGGAGTGGGGGTGGAGGGAGG
         GCAGTTCATGACAAGCCTGACCCAACACACTGTTGTGTCCAATTAGCACGACCTATTTTG

73961    CACACTGTTGTGTCCAATTAGCACGACCTATTTTGGCTTTGAATGGGGAAGGAGAATCTG
         TGACCTCTGAGTCAGCCTTTATGGAATGCTCAAGACTTAACAGGTCTTGCAAGATGCATT
         CTCTATCAGTCATAGTACTTTAATAATGGTTCCTTACTCAGCTTCATTCATTCATTGGAA
         ATTCATGCATGTCTTTGTAGTCCATAGGATTCTCAGAATAACCTTGTGACTAGACGAGAG
         AAATATTGACTGTGCGATTACTGAAGGCAAAGACTGTTTGTGATGCTTGATTACTTGATT
         [T,C]
         TTGCATATCCAACAAGTGAATGAGTGAGTAAGTGAGTGAGTGAGTGAATGATTGAATCTC
         CACTTGACTCCTGAGGCAACTGAGATGAGGAGATATTAAAATATCTCAAGGTGTCATTAT
         TGGACACACATATGACTAGGACTTTTGTTACTTTCATACTTCTCCATTTACAATTTCTTA
         AAAGAGTACTTTCCAAAGTATATACAATTTAATGATTTGAAATCCTGCTTGCGGCCAGGC
         ACGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGTGTGGATCACGAGA

75749    TGCCAACATCAGGCCAACTGAACCCTTGAGAGATTGCCCTATAAACTGTTATTGGAGCAG
```

```
CATCTGTTTGCCAGGGTAAATATTCAGTCATATGGACTGGGCCCTGGAGTCTTCAGATGG
TGCAGCCCTTCCCAGAGGGAAGACTTCATGGGGGTCCAAATGCTGGTAAGAAGTTTTTGT
TTGTCTGTGTCTGCCATCACAGCATAGAGATTAAGAACCTGGTATTTGGAATCAGACAGA
TTTTTGTGTATTATTTACCTGTTGCTGCATAACAAATTGCCCCCAAACTCGGTGACTTTC
[T,C]
ACAACAATCTTTGTTTATTATCTCTTATGGATCCCTGGGCCAAGAATTCACATGGAGCAC
AATGGAGAAGGATGGAAGACCTGAAAACTAAACTGAAATCATCTAAAGACTTATTTACTC
ATGTGAGCTGTGTTGGAGCTGTCAGCTGCAACACTTACACAAGGCCTCTGCATTGGGCCT
GAACTTCCTCACAACATGGTGACTGGGTCTTAAGGATTGGCCTAGATAAAGTCATGGCAG
AGACCACTCATGGAAAGCTATGTCAACAATGGAAGATGAATGGCCAGGATGAAGACAGAG
```

77275
```
TTTTCTATATATGAAATCATACTATTTGTGGTCCTTTGTGACTGGCCTCTTTCACTTAGC
ATAATGTTTTCAAGGTTCATTCATGTCTTAGCATGTATCAGTGCTTCATCCCTTTATGGT
ATATCCATAAAATGAAATATTATAGGACTATAGTATTTCATTTTATGGATATACCATATT
TTGTTTATCCATTTATTAGTTGATAGACATTTGAGTTGTTTTTACTTTTTGACTACTATG
ACTAATGCTGCTATGGAAATTCTTTTACAAGTTGTCATGTGGCCATATGTTTTCATTTTT
[C,T]
TTGAGTGTGTACCTAGTGGTGAAATTGCTGTGTTATGTAGTAACTCTATGTTTAGCCTTT
TGAGGAACTGCCAAACTGTTTTCCAAAGTGATTGCACCAGTTTACATTCTCACCAGCAAT
ATATGAGGGTTTCAATTTCTCCACATCCTTACCAACACTTGTTATTGTCTGTCTTTTTCA
TTATAGTCATTCTGTGGGTATGAAGTGGTATCTCATTGTGGTTTTGATTTACATTTTGTA
ACGACTGATGGGTGTTGAACATCTTTTTTATTTCCTATTGGTTATTTTGTATATCTTCTT
```

77282
```
TATATGAAATCATACTATTTGTGGTCCTTTGTGACTGGCCTCTTTCACTTAGCATAATGT
TTTCAAGGTTCATTCATGTCTTAGCATGTATCAGTGCTTCATCCCTTTATGGTATATCCA
TAAAATGAAATATTATAGGACTATAGTATTTCATTTTATGGATATACCATATTTTGTTTA
TCCATTTATTAGTTGATAGACATTTGAGTTGTTTTTACTTTTTGACTACTATGACTAATG
CTGCTATGGAAATTCTTTTACAAGTTGTCATGTGGCCATATGTTTTCATTTTTCTTGAGT
[G,A]
TGTACCTAGTGGTGAAATTGCTGTGTTATGTAGTAACTCTATGTTTAGCCTTTTGAGGAA
CTGCCAAACTGTTTTCCAAAGTGATTGCACCAGTTTACATTCTCACCAGCAATATATGAG
GGTTTCAATTTCTCCACATCCTTACCAACACTTGTTATTGTCTGTCTTTTTCATTATAGT
CATTCTGTGGGTATGAAGTGGTATCTCATTGTGGTTTTGATTTACATTTTGTAACGACTG
ATGGGTGTTGAACATCTTTTTTATTTCCTATTGGTTATTTTGTATATCTTCTTTGGAGAA
```

81236
```
TTGTGTTTGCTTAGTACTTCTTTCTTAAGGTTGTTGGCAAGAGCATCTGCTGGTAACTTG
GCTCAGTGTGTTGTAGGTTTTTGTATATGGTTTGGGTTTCCTATTCCTGGGCATTGAACT
ATTAAGATTCCTGCAGATAGGCATAACTACTTACAGCCTTTTCTGTGTATATATTAGCTC
TTACGGACCTCATAAACCTAAAGAGGTGCAGAGGAAAAGTGCCATCATTCTCATTTTACA
ACTGGGGAAGCAGAGGCCCAGAAAAGTGATCTAACTTTCCCAAGTTCACAAATGTGTTAT
[T,C]
AGAGCTGCAACCAGAGCTAAGGTTGAGGCTTTATGAACCTTAGGTTACTATTCGGTTAAT
AGGCTCAGTGCAGCCTTACCTTACTAATTATTAAAAATAGACAACATTAGGATTTAAACC
AGATGGTCTTTTCCTGTTGTTCACACTCTTACCCACTGTCAGCAATGGCCCATCAGATAA
TCCACACTGATTCATGAAAAGGCAAATATTTTCTGTTTCTGTTCTAAGCTAGGCTTGCCA
AAACCGAGAGCAATATTCTCTATCCCCGAGATGCATTGCTTCAAGCACCTATCTACTTTC
```

82536
```
GCCTGAATGAGTAATTCCTTCTGGATTACTAATATCAAAAGTCCATTTGTATCTGATTGA
GATGAGGAAAGAAATGCAGGATGGAGCAGGGAACCAGTCCTCACACTACATGGTTTACTC
CAGCGATTCTCAACGTTAGCACTACCTATGTTTTGCACAGGGTTAGTCTTTGTTTTGGGG
GGCTGTCCTGCACAATGGAGGATGTTCATCAGTATCCTTGGCCTCTATCCATTATAAGAT
GCCAGCAGCAAACCAACCTCCTCCAAGTTCTGATGACCAAAACTATATCCAGATATTTGC
[C,T]
GACTGGGGGCACTTGCCCCCAGTTGAGAGTCACTAATTACACAGTACATTTGTCCATGAT
GGGGACATGTAGGCTCACGGGGTAGCCAGTGACAGGCAGGCAGACAGGAGTGGGGGAATTT
TTTTTCTGTAAAGGCCCCAAGTAGCAAATATTTTAGGCACTGTCTGTCCCAACTACTAAA
CTCTGCCATGTAGCTTGAAAGCAGCCAAAGACAACACATAAATGAACATGTTCCAGCAAA
ACTATTTATGGGCCCTGAAATTTGAATTTCATATAATTTTCATGTGTCACTAAGTAATCT
```

82954
```
TTTTTTTTCTGTAAAGGCCCCAAGTAGCAAATATTTTAGGCACTGTCTGTCCCAACTACT
AAACTCTGCCATGTAGCTTGAAAGCAGCCAAAGACAACACATAAATGAACATGTTCCAGC
AAAACTATTTATGGGCCCTGAAATTTGAATTTCATATAATTTTCATGTGTCACTAAGTAA
TCTTTTTTAAAATTTTTATTCAACCACCTAAAAATGTTAAAACTATACATGAGTCGTACAA
AATCAGGTGGTGGGCTAGACTTGGCCCATGAGCCATAGTTTTCTGACCTTTGGACTAAGA
[A,C]
ATACATGAAGCCGTAACTTCATATTTATCCCTAAGATAAACATGGGATAAATATGATACT
TCTCCTAACACCATCAAATTTACATATAAATTTTAGAGAAAGCATATTATTTTATTAAAA
TGAGCATTGCTATATTTTGGAATAGGACCCAAGCCAAAATGAATTTTAGAGATAAAACAT
TATATTCCAAAGTTATATCTTGCTTCCCATGGGCTGTTGACCCATGCCTCAGGTCCCCAG
AGGCCTTCATTTCCTGCCTTCATTTTCCCTTGCTTTTAGGCTACCTTGGTAGGAAAACTT
```

```
84157    TAGAGCTGTCAGCCGTGGATGGGAGATCAGGGATTGGCTGGCAAAAGTGCCAGGGTGTTG
         ACAGGCATAGTCTCAGTCATCTCCACAGTTCTTCCTGGCTGGAAATGCCTCTGGCTATAT
         TACCCTTATTGCATGATTTCATGGTACTGATCAGATCCAAAGAAGGAGGATGATTGTGAG
         ATGCAAAGCTCAGGGGACGACTACGCGGTGAAGGTGAGAGAATGCCCAGAGCTTTGAAGA
         GGCTGCTTCTTCTTCAAAGCTGTGTTCCAGCAGAGCACATTTTGTGCATACTTGAATTTT
         [G,C]
         GTTGGCTCTAGGCTGAGCGCATTCTATTGTGGCGTTGGCATGGGAAGAGGGAGGCATGCG
         AGAAATATTGCATCTCTGCTATTCTCCTGGGCCCTTGTGAATGGGAATGTCTTCTTAATG
         AGCCTATCCCAGAGAGTCTGGCCTTTCAGATAAACAAATAAGCATCAGCAGGAGATGCTC
         ACAAAAGGACTGGGCAAAATAGGGCCACGTTGAGTGACAACCCAAATAAAGGAGTCCTAA
         GAGGTCTGAAGCTGGTGGCTAATGAGCACATCTCCTCATTTGTGATTTCTTGGCCAGGAC

85443    GCTCGTGAGGCCTGGCACGGAATTAGCAAGACTAAAGGCTCTGTCCCAGTCCAACCTTCT
         GTGAGTCTATAACTGAAGCATCCAAAGTATAAGCTGGGTGATTAGGGGAAGAAGAAGTCA
         CCTAGCTGGCAAGGGGCCTAAAACTCAAGTCCCCTCCTTCTAGGACCAGAGTACTCACCA
         ACTACCAAGCTGCCTTAAAATAAAAACATTCAAGAACAAGTGATGTGCAGAGAGGCAACA
         CAGTGATAAGTAACTGGGGTCTGGAAATGGGAGACTTCAACTTCAATTTCAGCACTGTTA
         [T,G]
         TTTGGTAGTTTAATGATTTAGAGTCAGTTGTTTAATCTCTTAGAGACTCAGTTACTTCAT
         CAGCAAGGGTGTTACTATAGTAATACCTGCTAGACATTATTATTATATGGAGAGAGAGAG
         CTTGGTAAGCTGTGACATATACATTCTAGTTGGTGGTTGTTTCTGTTGTTATTATTAATA
         GTAACAACAATAAATATCCTGTTGTTTATTTTTTTGAAGTGTTCAGTGGCTGGTAACTGA
         ATTAGAGTGCCTGGAGATATAGGTAAGGGTTTTTTGTTTTAATAATCATTATCTTTGTTC

85674    GAGGCAACACAGTGATAAGTAACTGGGGTCTGGAAATGGGAGACTTCAACTTCAATTTCA
         GCACTGTTATTTTGGTAGTTTAATGATTTAGAGTCAGTTGTTTAATCTCTTAGAGACTCA
         GTTACTTCATCAGCAAGGGTGTTACTATAGTAATACCTGCTAGACATTATTATTATATGG
         AGAGAGAGAGCTTGGTAAGCTGTGACATATACATTCTAGTTGGTGGTTGTTTCTGTTGTT
         ATTATTAATAGTAACAACAATAAATATCCTGTTGTTTATTTTTTTGAAGTGTTCAGTGGC
         [T,C]
         GGTAACTGAATTAGAGTGCCTGGAGATATAGGTAAGGGTTTTTTGTTTTAATAATCATTA
         TCTTTGTTCAAGAGAATAGGAAAAATATAAGCCTCTTTTTAACTTTAATGCAAAAAAGTC
         TTTATAGCTTGTGTGTGAAAAACAAGAGGAAGGGAGGAAGGGGAGGAAAGAGATTGTCTA
         TTTCTACTTAAAGCTAATTAGAGAAGTAATTTTAGGTAAGAGTATTATGACCTGATTTCT
         GATTAATTTAAGTATTATTATACTGTTGTAATAGAAATCCCTGAAGTGCTTTATTGATTA

85850    ATGGAGAGAGAGAGCTTGGTAAGCTGTGACATATACATTCTAGTTGGTGGTTGTTTCTGT
         TGTTATTATTAATAGTAACAACAATAAATATCCTGTTGTTTATTTTTTTGAAGTGTTCAG
         TGGCTGGTAACTGAATTAGAGTGCCTGGAGATATAGGTAAGGGTTTTTTGTTTTAATAAT
         CATTATCTTTGTTCAAGAGAATAGGAAAAATATAAGCCTCTTTTTAACTTTAATGCAAAA
         AAGTCTTTATAGCTTGTGTGTGAAAAACAAGAGGAAGGGAGGAAGGGGAGGAAAGAGATT
         [G,A]
         TCTATTTCTACTTAAAGCTAATTAGAGAAGTAATTTTAGGTAAGAGTATTATGACCTGAT
         TTCTGATTAATTTAAGTATTATTATACTGTTGTAATAGAAATCCCTGAAGTGCTTTATTG
         ATTATCTGTTGGTAGAATGAAAGGGTAAGCAGCTGTAGTAAATAAAATTTTTGTCTGAGG
         CAAAGCAAAGGAGAAGTAATATAGGAGAAATTATTATAATAAAGATGGGAGTGAGAGAAG
         AAACCTGGGTTCTAGTTCTTTCAGATAGGTGACCTTGAACAAATCTCTTCCCTATACTTG

85905    TCTGTTGTTATTATTAATAGTAACAACAATAAATATCCTGTTGTTTATTTTTTTGAAGTG
         TTCAGTGGCTGGTAACTGAATTAGAGTGCCTGGAGATATAGGTAAGGGTTTTTTGTTTTA
         ATAATCATTATCTTTGTTCAAGAGAATAGGAAAAATATAAGCCTCTTTTTAACTTTAATG
         CAAAAAAGTCTTTATAGCTTGTGTGTGAAAAACAAGAGGAAGGGAGGAAGGGGAGGAAAG
         AGATTGTCTATTTCTACTTAAAGCTAATTAGAGAAGTAATTTTAGGTAAGAGTATTATGA
         [T,C]
         CTGATTTCTGATTAATTTAAGTATTATTATACTGTTGTAATAGAAATCCCTGAAGTGCTT
         TATTGATTATCTGTTGGTAGAATGAAAGGGTAAGCAGCTGTAGTAAATAAAATTTTTGTC
         TGAGGCAAAGCAAAGGAGAAGTAATATAGGAGAAATTATTATAATAAAGATGGGAGTGAG
         AGAAGAAACCTGGGTTCTAGTTCTTTCAGATAGGTGACCTTGAACAAATCTCTTCCCTAT
         ACTTGGCCTCGGTTTCCCCATCGGAACAACCTAGGGCATACTCTAGATAATCCCTAAGGT

86535    TCTACCTGTACAATACTGAAACAGTGATTAAGAGGGAGAGACACCCACAAAGAAAGAAAT
         AGTTTGTGCTGTGCTCAAATGCCTGACTGATAAAAAAGAGAACAGACTCATAAAACCCAC
         TAATTCAAATTAAATGGATAATTCTTGTTGATTTTGAGCTGGCAATCTCAGGCTTCTAAA
         TCACAAGGAAACTCCATTTGATCCTGCAATGGTCTCTTGGTCTCTTTCTTAGCTCAGTAG
         TGCTAAGCACAGAGGTTTCATGGAAATCAAGAGAGAAAGAGAGAGAGAGAGAGAGAGAGA
         [-,G]
         AGAGAGCTGTTTAAAAAAAGAAGAACAATATACTTGGATGAACTAAAGAGTGGTCCTCAT
         GAAAGCCTCATAATGTCCATTGCCTACCTGTTTAACCCTTTGTGGCCTGATTTTTGGTCC
         TCAACTGAAATCAAATTAGGTAGTCTTATGTAGGGAAATGAATAACTTGTACACTGTTGT
         TGTTTGCCATCTTTAGGACCACCAAAGGGTAACGAATTCAGCAGACCCACAATCCGGCAC
         TTCAGGTTTTTGAAATTTACTCATGAAAATTTAGGAAGTCCTAAAGGCTGTGAAAAATCA
```

FIGURE 3, page 92 of 122

```
87371   GAGTTGTAGGTGCACTCTGTTCTCTGGTTCTTTGCAGTGTAATGGCAGAACTGAGGTTAG
        AATTCTCCTTGGATGTAAGGATCACCAGCCCACCAGGCTGGCAGTTAGACAAGGGAGTGA
        TGGATTTGGGATGCTTTGTGTGACCTTGTATACAACAGGTTCTTAGACACAACCCTAGGA
        CATGGAAAAGAATTACATTCATCCTGAGCCCCAGCTACTGTTACCAATTCAAATTAGGAC
        AACATATTGATTAAGATACAGGTAGTTATGCTACCCTAAGAACTGGAATCTGAATACCTA
        [C,G]
        TTTTTATTTCTACTTCTACCGCTTGTTAGTAACCTATTCTTGATCCACCATTTAACTTCT
        GTGAGCCTCAGTTTCTCCATCTTTAAGACAGTGATGATAATGACAGTATCTGTAGAACAG
        CTTAACTTGAACTAAATGAGAAAAACTAAACAAAACACATAGAATTAAGTATGAATTTCT
        GAGGTTAGTTTATACATGTTTTAAGAGCTTAGAGAAAAGGAAAAAACATAAGTATCCTAA
        GGAGATTAGGAAATGTTTCCTTGGGGAGGTTGGAAAGCAGCTAAGCCTTGAAGAATAGGA

87392   CTCTGGTTCTTTGCAGTGTAATGGCAGAACTGAGGTTAGAATTCTCCTTGGATGTAAGGA
        TCACCAGCCCACCAGGCTGGCAGTTAGACAAGGGAGTGATGGATTTGGGATGCTTTGTGT
        GACCTTGTATACAACAGGTTCTTAGACACAACCCTAGGACATGGAAAAGAATTACATTCA
        TCCTGAGCCCCAGCTACTGTTACCAATTCAAATTAGGACAACATATTGATTAAGATACAG
        GTAGTTATGCTACCCTAAGAACTGGAATCTGAATACCTACTTTTTATTTCTACTTCTACC
        [G,A]
        CTTGTTAGTAACCTATTCTTGATCCACCATTTAACTTCTGTGAGCCTCAGTTTCTCCATC
        TTTAAGACAGTGATGATAATGACAGTATCTGTAGAACAGCTTAACTTGAACTAAATGAGA
        AAAACTAAACAAAACACATAGAATTAAGTATGAATTTCTGAGGTTAGTTTATACATGTTT
        TAAGAGCTTAGAGAAAAGGAAAAAACATAAGTATCCTAAGGAGATTAGGAAATGTTTCCT
        TGGGGAGGTTGGAAAGCAGCTAAGCCTTGAAGAATAGGATGTATTTTGAACACTGGGAGA

87423   GAGGTTAGAATTCTCCTTGGATGTAAGGATCACCAGCCCACCAGGCTGGCAGTTAGACAA
        GGGAGTGATGGATTTGGGATGCTTTGTGTGACCTTGTATACAACAGGTTCTTAGACACAA
        CCCTAGGACATGGAAAAGAATTACATTCATCCTGAGCCCCAGCTACTGTTACCAATTCAA
        ATTAGGACAACATATTGATTAAGATACAGGTAGTTATGCTACCCTAAGAACTGGAATCTG
        AATACCTACTTTTTATTTCTACTTCTACCGCTTGTTAGTAACCTATTCTTGATCCACCAT
        [T,C]
        TAACTTCTGTGAGCCTCAGTTTCTCCATCTTTAAGACAGTGATGATAATGACAGTATCTG
        TAGAACAGCTTAACTTGAACTAAATGAGAAAAACTAAACAAAACACATAGAATTAAGTAT
        GAATTTCTGAGGTTAGTTTATACATGTTTTAAGAGCTTAGAGAAAAGGAAAAAACATAAG
        TATCCTAAGGAGATTAGGAAATGTTTCCTTGGGGAGGTTGGAAAGCAGCTAAGCCTTGAA
        GAATAGGATGTATTTTGAACACTGGGAGAAGAGATGAGAAGGTAGTGAAGTGGAGGCAAT

87627   TACAGGTAGTTATGCTACCCTAAGAACTGGAATCTGAATACCTACTTTTTATTTCTACTT
        CTACCGCTTGTTAGTAACCTATTCTTGATCCACCATTTAACTTCTGTGAGCCTCAGTTTC
        TCCATCTTTAAGACAGTGATGATAATGACAGTATCTGTAGAACAGCTTAACTTGAACTAA
        ATGAGAAAAACTAAACAAAACACATAGAATTAAGTATGAATTTCTGAGGTTAGTTTATAC
        ATGTTTTAAGAGCTTAGAGAAAAGGAAAAAACATAAGTATCCTAAGGAGATTAGGAAATG
        [T,C]
        TTCCTTGGGGAGGTTGGAAAGCAGCTAAGCCTTGAAGAATAGGATGTATTTTGAACACTG
        GGAGAAGAGATGAGAAGGTAGTGAAGTGGAGGCAATAGCCTGCACTATCCAGAGACAGTT
        TCTGATTGTCCTAATGCTATGGGCTCTCTACTTCAGTTTAAGAAATATTCCAATCTTTGA
        TACCTTCATTCAACAGTCCTTTCTATTTTTCTAATTTCATTTCCTGAATTGTTTCCCTGC
        GGAGGAGTGGGCCTACTTGTTGAAATAAATCACATCACAGATACCTCTTTTCTTCTCTTT

87637   TATGCTACCCTAAGAACTGGAATCTGAATACCTACTTTTTATTTCTACTTCTACCGCTTG
        TTAGTAACCTATTCTTGATCCACCATTTAACTTCTGTGAGCCTCAGTTTCTCCATCTTTA
        AGACAGTGATGATAATGACAGTATCTGTAGAACAGCTTAACTTGAACTAAATGAGAAAAA
        CTAAACAAAACACATAGAATTAAGTATGAATTTCTGAGGTTAGTTTATACATGTTTTAAG
        AGCTTAGAGAAAAGGAAAAAACATAAGTATCCTAAGGAGATTAGGAAATGTTTCCTTGGG
        [G,A]
        AGGTTGGAAAGCAGCTAAGCCTTGAAGAATAGGATGTATTTTGAACACTGGGAGAAGAGA
        TGAGAAGGTAGTGAAGTGGAGGCAATAGCCTGCACTATCCAGAGACAGTTTCTGATTGTC
        CTAATGCTATGGGCTCTCTACTTCAGTTTAAGAAATATTCCAATCTTTGATACCTTCATT
        CAACAGTCCTTTCTATTTTTCTAATTTCATTTCCTGAATTGTTTCCCTGCGGAGGAGTGG
        GCCTACTTGTTGAAATAAATCACATCACAGATACCTCTTTTCTTCTCTTTTGTTAAAAGT

87777   GTATCTGTAGAACAGCTTAACTTGAACTAAATGAGAAAAACTAAACAAAACACATAGAAT
        TAAGTATGAATTTCTGAGGTTAGTTTATACATGTTTTAAGAGCTTAGAGAAAAGGAAAAA
        ACATAAGTATCCTAAGGAGATTAGGAAATGTTTCCTTGGGGAGGTTGGAAAGCAGCTAAG
        CCTTGAAGAATAGGATGTATTTTGAACACTGGGAGAAGAGATGAGAAGGTAGTGAAGTGG
        AGGCAATAGCCTGCACTATCCAGAGACAGTTTCTGATTGTCCTAATGCTATGGGCTCTCT
        [A,G]
        CTTCAGTTTAAGAAATATTCCAATCTTTGATACCTTCATTCAACAGTCCTTTCTATTTTT
        CTAATTTCATTTCCTGAATTGTTTCCCTGCGGAGGAGTGGGCCTACTTGTTGAAATAAAT
        CACATCACAGATACCTCTTTTCTTCTCTTTTGTTAAAAGTTCTGTTAAAATATATATATT
        GTTAAAAAATTAAAGGTTATCTCCAGATAATTCCCCAAATGAGTAGGCTTAGGCTTTAAT
```

FIGURE 3, page 93 of 122

```
                    CATATTATGTTCCCTTCCTTCTTGCTCTTCACTTGCCAAGTTATACTAATGATCATAATC

        87810       AGAAAAACTAAACAAAACACATAGAATTAAGTATGAATTTCTGAGGTTAGTTTATACATG
                    TTTTAAGAGCTTAGAGAAAAGGAAAAAACATAAGTATCCTAAGGAGATTAGGAAATGTTT
                    CCTTGGGGAGGTTGGAAAGCAGCTAAGCCTTGAAGAATAGGATGTATTTTGAACACTGGG
                    AGAAGAGATGAGAAGGTAGTGAAGTGGAGGCAATAGCCTGCACTATCCAGAGACAGTTTC
                    TGATTGTCCTAATGCTATGGGCTCTCTACTTCAGTTTAAGAAATATTCCAATCTTTGATA
                    [C,T]
                    CTTCATTCAACAGTCCTTTCTATTTTTCTAATTTCATTTCCTGAATTGTTTCCCTGCGGA
                    GGAGTGGGCCTACTTGTTGAAATAAATCACATCACAGATACCTCTTTTCTTCTCTTTTGT
                    TAAAAGTTCTGTTAAAATATATATATTGTTAAAAAATTAAAGGTTATCTCCAGATAATTC
                    CCCAAATGAGTAGGCTTAGGCTTTAATCATATTATGTTCCCTTCCTTCTTGCTCTTCACT
                    TGCCAAGTTATACTAATGATCATAATCTCTTCTATGTGTTTTGGACTTTACAGTGTGTGA

        89812       AACCCAGTCTCTACTAAAAATACAACAAATTAGCTGAGCATCATGGTGCGTGCCTGTAAT
                    TCTAGCTACTCGGGAGGCTGAGGACATGAAAATCGCTTGAACCTAGGAGGCAGAGGTTGC
                    AGTGAGCCAAGATCACACCATTGCGCCCCAGCCTGAGCAGCAGAGAGAGACTCTGTCAAA
                    AAAAAAAAAAAAAAAAAAAATGAAAGTAAAGAAGAAAGAAAGAAAAGGAGAAAG
                    AAAACACGATTCTCTGAAGAAAAAAGCAATACACTGAGAGAAGGAAACATGAAGGTATTC
                    [G,A]
                    TTTAAATAGTGGGTCAGTGAATGCCCTTACTGAGTAAAAGTGACATTTAAGCCTAGATTT
                    CAATGCTGGATGGTATTCATGCTACAAAACAATTTGGAGAATATTCTAGCCAAAAGGGAA
                    TAATTTGTGCAATGATTTGAAAAATGGAAGGACAACCAGGGTAGCTGGAATGTTTATGGC
                    AAGGGAGAGAGTGATAGAAGATTAAATCAGGAAAACAGAGAAAGTAACAGATGAGGCAGT
                    GCTTGACAGGCCATGAAAAGAAGAGTGACTTTTATTTTAAGTGCATGAGAAGCCACTGGA

        90137       CCTTACTGAGTAAAAGTGACATTTAAGCCTAGATTTCAATGCTGGATGGTATTCATGCTA
                    CAAAACAATTTGGAGAATATTCTAGCCAAAAGGGAATAATTTGTGCAATGATTTGAAAAA
                    TGGAAGGACAACCAGGGTAGCTGGAATGTTTATGGCAAGGGAGAGAGTGATAGAAGATTA
                    AATCAGGAAAACAGAGAAAGTAACAGATGAGGCAGTGCTTGACAGGCCATGAAAAGAAGA
                    GTGACTTTTATTTTAAGTGCATGAGAAGCCACTGGAAGGTCACAAGTAGAAAGGGATGTG
                    [G,A]
                    TCTCATCTGTTTTAAGAATTTGGTCCAGTCGGCTGGCCGCGGTGGCTCATGCCTGTAATC
                    CCAGCACTTTGGGAGCCCAAGGCGGGTGGATCACGAGGTCAGGAATTCGAGACCAGCCTG
                    GCCAGCATGGTGAAACCCCGTCTTTACTAAAAATACAAAAAATTAGCTGGGCATGGTGGC
                    GTGCACCTGTAGTCCTAGCTACTTGGGAGGCTGAGGCAGGAGAATTGCTTGAACCCGCCA
                    GGTGGAGATTGCAGTGAGCCGAGATAGCACCATTGCACTCCAGCCTGGGTGACAGAGGGA

        90400       AGAAGCCACTGGAAGGTCACAAGTAGAAAGGGATGTGGTCTCATCTGTTTTAAGAATTTG
                    GTCCAGTCGGCTGGCCGCGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGCCCAAGG
                    CGGGTGGATCACGAGGTCAGGAATTCGAGACCAGCCTGGCCAGCATGGTGAAACCCCGTC
                    TTTACTAAAAATACAAAAAATTAGCTGGGCATGGTGGCGTGCACCTGTAGTCCTAGCTAC
                    TTGGGAGGCTGAGGCAGGAGAATTGCTTGAACCCGCCAGGTGGAGATTGCAGTGAGCCGA
                    [G,A]
                    ATAGCACCATTGCACTCCAGCCTGGGTGACAGAGGGAGACTCCATCTCAAAAATAAATAA
                    ATAAATAAATAAAAGAATTTCGCCCAGTCACTGAACTTCTTTGTGACTCCCTTTTCTCTC
                    CTGAAAACAAGGATTAAACTACTGATTGTCCTTCCAAGAGGTTGTCTGAGTGTCAGATCA
                    TGTTCATTATAATACTTTGCTCCAAGTTGTGCTTGATAAATTTTGAACTGAATTGTTTCA
                    TAACAATATGAAAATGCTTTATAAACTGTAAAGGGCCATGCAAGTATAAAGTATTACCAA

        92359       TCAAGTGTCTGCCTTAGAGCTAAGCTTCTCTCTTGGTGAAATGGTTTAAAATACCCATCC
                    AGTACATGTCCTAAAATGGACATGAGGTTCCTCTGGGATAAAGGATGAGAAGATACTTTG
                    TATTTTGTAACATTCTACTCAGATGCAGGATGTTCATCTCATTAATATTACACTCTGGTG
                    CCAGTTTCTGGGGGGTCAGCTGCAGAGAAGCTAGTTCAGGCTGCAACATCTCATTAGAAG
                    CTGAAATTTGGATTCAGGAAGAGGAGCATGGAGTGGGTGAGAGCCACTGTCTGCTGCTCA
                    [A,G]
                    GTTCCTGCTGCTATCTGTATTCAGAGAGGCATCCTGGTACCTTAGCAGTGCTGCTCAGTG
                    GGACGTCTCTGACTTTGATGTTGCACGTGTCAACATTCTAATAGGGCAGCAGCCGAGATG
                    GGGTATGAGTTTGGAAAGACATCTTATGACAGCTTTTTCCTAAAGATGTTTCAAGAGATA
                    ACCCTTTAGAAATAACGAAGGTAGTTTATGCATTTCATAGGAAACCCAGCGGCTTACGTA
                    GCAGCTCACTTCGAAGTCTGGCATGCGGACGGCTTCCTACTGTCCCGTTTTTGCCCTCCC

        92555       CAGCTGCAGAGAAGCTAGTTCAGGCTGCAACATCTCATTAGAAGCTGAAATTTGGATTCA
                    GGAAGAGGAGCATGGAGTGGGTGAGAGCCACTGTCTGCTGCTCAAGTTCCTGCTGCTATC
                    TGTATTCAGAGAGGCATCCTGGTACCTTAGCAGTGCTGCTCAGTGGGACGTCTCTGACTT
                    TGATGTTGCACGTGTCAACATTCTAATAGGGCAGCAGCCGAGATGGGGTATGAGTTTGGA
                    AAGACATCTTATGACAGCTTTTTCCTAAAGATGTTTCAAGAGATAACCCTTTAGAAATAA
                    [-,T,C]
                    GAAGGTAGTTTATGCATTTCATAGGAAACCCAGCGGCTTACGTAGCAGCTCACTTCGAAG
                    TCTGGCATGCGGACGGCTTCCTACTGTCCCGTTTTTGCCCTCCCTGCACATCTGTGAGAA
                    ATCATCACTTGTCACAGTAACACAGTATTGTATTTAGTTACATTGACAGCAATGGTGAAA
```

FIGURE 3, page 94 of 122

```
        GGACTATAAGCCTATTTCCTTCTAAACTGTTCACATCAAATGAACCTTAAACATTTACTC
        CTCTCTTAAAATGTAAATCAGATCACCTCAGCCTACTGTTTAAACATTCTATCATGGCTT

92641   GCCACTGTCTGCTGCTCAAGTTCCTGCTGCTATCTGTATTCAGAGAGGCATCCTGGTACC
        TTAGCAGTGCTGCTCAGTGGGACGTCTCTGACTTTGATGTTGCACGTGTCAACATTCTAA
        TAGGGCAGCAGCCGAGATGGGGTATGAGTTTGGAAAGACATCTTATGACAGCTTTTTCCT
        AAAGATGTTTCAAGAGATAACCCTTTAGAAATAACGAAGGTAGTTTATGCATTTCATAGG
        AAACCCAGCGGCTTACGTAGCAGCTCACTTCGAAGTCTGGCATGCGGACGGCTTCCTACT
        [G,C]
        TCCCGTTTTTGCCCTCCCTGCACATCTGTGAGAAATCATCACTTGTCACAGTAACACAGT
        ATTGTATTTAGTTACATTGACAGCAATGGTGAAAGGACTATAAGCCTATTTCCTTCTAAA
        CTGTTCACATCAAATGAACCTTAAACATTTACTCCTCTCTTAAAATGTAAATCAGATCAC
        CTCAGCCTACTGTTTAAACATTCTATCATGGCTTTCCATCATGAATAGAATCCAAATGCC
        TAACACAAGCTGGATGGTAGCCTGATCTGACCTTTGCTGACCTCTCTGACCTCCCCTCAC

93969   GATCTATTATCCAATGAATATTTGTTGGAGGAATGAATCAATCCTCTCTTTTTACAGAGG
        GAGAAGTTAGGACCAGAGAAGAGTAGACATCATTGTGTTTCTGAAGGTTTTATGTTAGCA
        CCTTTGGGCCATGCTGGGACCTTGGCAAATTATAGCATTCAAGGGTTTTAGGGTAATGTT
        CATGGATCCCTAGAAAGTCAGCAAATGGGGATCAGGGTGTCTTGAGCCCTGTGAAAGTGT
        TGGCATATTTCTGGGGAGAAGATTCATAGCTTTTATTAGTACTTCAAATAGATATTTGAT
        [G,C]
        CATTGGTAGCACCCATCAATTTTTCCTTTTAATTAGCTTAGTTTGGGGAATGTGGAGCGA
        GCCTAAAAGAGGATAGATGTCTCAGCACCACCTTGAAGACCTTTCTTCTTTTTCACTGAC
        AGCATGGTTCCATCGTTCTGCCCCTGAATACGGGGACAGCTCCTCTTTTTCTATTACCAG
        AGCATATCTTTCTTAAATTCACTATTTCCATGATGAATCTACAGTGCCAGAAGCTAGAGT
        CTGGAATCAAAGAATTCCAGAGTTGGGAGAGCACTTAATTCAGTGTTCATAAACCAAAGT

96601   GATGACTACAATGTGGTATTTTATGTTTGTTTGAGAATATTAGCTGTTAGGGCTGTGGTA
        ACCTCTACCAGATTGGGTTAAACAAAAGCAGTCTGCAGTCCATGATAATACAATGGAAAA
        GCATAGGGAACACAAGAAACCTGGGTGAACTTTTTCACAAACAATTCATTTTTCTAATGA
        GGCAACTAAAGCTCAGAAAAGGAAAGGGTCTTCCTTGTGATCATACATTCATTTTATCAT
        TCAACAAACCTTAACTGAATACCTCCTATTCAACAGTGCACGAGCTGCCAGGAACAATGA
        [A,G]
        GTAAGTATTAACAGAAATGCCTAACATTTACTGAGCACTTCTTAGGTGCTGGGTACACAC
        TAAGTCCTTCAAGTAGTCTCTCCTGCTGAAAGTGCTATTCCAAGTGCAAGTTGGAACAGC
        AGGTGCCTTGGCACCAAAGCTCTATGTGACCGACCTTTCTGACCTGGCCTCACTTCCTTC
        CCCCTCCCCTCATTTCTCTCTCTTCTCTCCCTTTATTTTTCTTTTCTTTCTCTCTCTCTT
        TTTTTTTTTTTTTTTTTTTTTTTGAGACAGACTCTTGCTCTGTCGCCCAGGCTGGAGTA

96865   CCTATTCAACAGTGCACGAGCTGCCAGGAACAATGAAGTAAGTATTAACAGAAATGCCTA
        ACATTTACTGAGCACTTCTTAGGTGCTGGGTACACACTAAGTCCTTCAAGTAGTCTCTCC
        TGCTGAAAGTGCTATTCCAAGTGCAAGTTGGAACAGCAGGTGCCTTGGCACCAAAGCTCT
        ATGTGACCGACCTTTCTGACCTGGCCTCACTTCCTTCCCCCTCCCCTCATTTCTCTCTCT
        TCTCTCCCTTTATTTTTCTTTTCTTTCTCTCTCTCTTTTTTTTTTTTTTTTTTTTTTTTT
        [T,-]
        GAGACAGACTCTTGCTCTGTCGCCCAGGCTGGAGTACACTGTCGCGATCTCAGCTCACTG
        CAACCTCCACCTCCCGGGTCCAAGCAATTTTCCTGTCTCACCCTCCCAAGTAGCTGGGAC
        TACAGGCACCCACAACCATGCCCAGCTAATTTTTGTGTTTTTAGTAGAGACAGGGTTTCA
        CCATATTGGTCAGGCTGGTCGTGAAATCCTGACCTCAGGTGATCCGCCCTCCTCGGCCTC
        CCAAAGTGCTGGGATTACAGGTGTGAGCCACTGTGCCCGGCCCCTGTCCTCATTTCTTAT

98448   TTCAGTACACAAGAAAACTGATAGTCCACTTGAGGCAC
        [A,G]
        TTTCCAGACAGGGTCTTAACTTCTCCTCACTGCTGATC

100137  CTTTCTAAAGCACTGGGTTTGTGTGTATGTGTATGCACGCACTTCCCCCAACCCCCATGC
        CTCCATTACTCCTCTACTCCAAAAAATGTCAGTTGTTTTTCTAGTGCCTGCAATGTAAGG
        CCTAAGCCCACTGGCATCAAAGACTTCTGTAATTTAGCATCAACTAAACTTTCAGCTGTC
        ACTTCCCACTGTTGGGAAACCATATAACATGATGTTAGAACATAGTGACAGAAGGAGCTT
        TGGAGTCAAATAGCTGATGTAAATCTTGTTTCTTCCATTTTCTGCCTTTGTGACCTAGGA
        [T,C]
        AGATTGCTTAATCCTGCTGAGCCTATGGTTTTATACTTTTAAATTGAAATTATAGTGTAA
        AGTTTAAATCAGATAATTAAATAAAGCCTTGAGCATAATCCATGATGTACTGAAAGTAAT
        GATTAAATAATAGTCTATTAGACTATACAGCCTACTCACTATCTCTCATTCTTATCTAGT
        ATTTACTAGCTAGTTAGGCACTATTTCTATTGCTTAGAACAACTTCTTTCGCATCTATCC
        AAAATGTATAACCCTTTGGTCACCAGATCAATATCTTCAGCTCCTTCCTTTCAGGTACTA

100264  CCACTGGCATCAAAGACTTCTGTAATTTAGCATCAACTAAACTTTCAGCTGTCACTTCCC
        ACTGTTGGGAAACCATATAACATGATGTTAGAACATAGTGACAGAAGGAGCTTTGGAGTC
        AAATAGCTGATGTAAATCTTGTTTCTTCCATTTTCTGCCTTTGTGACCTAGGATAGATTG
        CTTAATCCTGCTGAGCCTATGGTTTTATACTTTTAAATTGAAATTATAGTGTAAAGTTTA
```

FIGURE 3, page 95 of 122

```
           AATCAGATAATTAAATAAAGCCTTGAGCATAATCCATGATGTACTGAAAGTAATGATTAA
           [A,G]
           TAATAGTCTATTAGACTATACAGCCTACTCACTATCTCTCATTCTTATCTAGTATTTACT
           AGCTAGTTAGGCACTATTTCTATTGCTTAGAACAACTTCTTTCGCATCTATCCAAAATGT
           ATAACCCTTTGGTCACCAGATCAATATCTTCAGCTCCTTCCTTTCAGGTACTATATATTG
           CATTTGCTTCATAACACCTAATACAATGCATGAAGCATGCTTTTAATAAACATTCCTTGG
           ATGGATGAATAAATAAATGAATAAAGAAATGAAGTAAAAGAAAGTCAATTTTTATATTAT

  100873   AGGGAAAAAAGAGAAACGAATCAAAATATCTTGGAAATAAAATTCTGTTCCTCTCTGAGC
           TTTTGATTTGTTTATAAGCTGGGGAGCATGTTGCTTACCATTTATTTAGTCTCACAAGTA
           TGTTAACATCATCAACATAAGGTTTATGAAGTACTTTATACTGCCTGGAGGAAGGATGGT
           ATAGAAATTTAAAATATTATATATGATCCTTCCAGGAAGAAAAAAGAGCAATATCTAT
           TCTGTGAGGTGCATCAATTTTGGATCACTCTAATGGAAGTGCCCCGAGCAGTTGGTTTAT
           [T,C]
           TCTTCAAATGTGAATTAATTTATACATTTCAAAGCTCCTGATGGATACTTTTCATTTTAA
           TTAAGTACATTTTTGCCAAATTTCAACTTTAAAAACTCAACAAATTTGTTCCCACACTTG
           CTTTGTAGAATTTGCAATATTAGATATAAATTTATTATAAAAGGGTATGTTAGAAACTTC
           TCATACTGAAATCGGCCACCCAGCAACTTTTTCTTAGGATTCAAGTGCTCTAACATGTGC
           TTGCTTGTTTGTCTGTGTGATTCGGTGGTTTTATTTTGATTTTCATAGAAAATAATAAAT

  102673   GAAGAATACCACCTTTTTTTCTTACCCTTTTAAAGTTGAGAAGATTATTTGTAAGAGTGT
           GAAATGGTCTAAGCATTGCCCCTTTAAATGGGGGTATTGTGTTAATTGTAAGCACTGCAA
           AGTGGGTTGCTATATTGTGGCTGTTGTACTCAGTGTCAAAAGATTTAGTTCCTTCTTGAC
           CCAGTCCTAGTTATTCAAGAGTCATCAAACAGAGATACACAATTTTAAATTGTTTTTCAG
           AATGAATCTGAAGAGAGCGAAGAGTTGAGTGGAGAAGTCAGCTAGATCATCCTTGTCTAT
           [C,T]
           TATGCAGACTCCTTCCCATAATTTTTCCCCAATCTAGTTTATGCCTAATTTTATACCAGG
           AATTTCTTCCTGACCTTTTAATTGCCTGTCCTTAGGGCATGAAAATTATGAGTGTAATTT
           TACAGACCATTCTTAACTTTTCAAAACCATTCCAACGATATTCATCTAAGAAATGGCCAG
           TGTTTGTGGAGCACTAATTTGTCACGCAGCATTGTGCTAGACATTCAAGATATCCCATTG
           AGTATCGCACGAAAACCCTGACCAACACATCCCTATACCAACTAGGTCAGATCCTCATTC

  102807   TTGTGGCTGTTGTACTCAGTGTCAAAAGATTTAGTTCCTTCTTGACCCAGTCCTAGTTAT
           TCAAGAGTCATCAAACAGAGATACACAATTTTAAATTGTTTTTCAGAATGAATCTGAAGA
           GAGCGAAGAGTTGAGTGGAGAAGTCAGCTAGATCATCCTTGTCTATCTATGCAGACTCCT
           TCCCATAATTTTTCCCCAATCTAGTTTATGCCTAATTTTATACCAGGAATTTCTTCCTGA
           CCTTTTAATTGCCTGTCCTTAGGGCATGAAAATTATGAGTGTAATTTTACAGACCATTCT
           [T,A]
           AACTTTTCAAAACCATTCCAACGATATTCATCTAAGAAATGGCCAGTGTTTGTGGAGCAC
           TAATTTGTCACGCAGCATTGTGCTAGACATTCAAGATATCCCATTGAGTATCGCACGAAA
           ACCCTGACCAACACATCCCTATACCAACTAGGTCAGATCCTCATTCACAGGTATTCATAA
           TACATAAAATTCCCCTGCATAGCACTAGGTCACATGTAGGCAATAATTATTTATCTTGTA
           TATGCCTTTTCACTCAACTGTGAGCTCCTAGAGGACATAGGTAAAATCTGTTTTGTTCAC

  102938   TGAGTGGAGAAGTCAGCTAGATCATCCTTGTCTATCTATGCAGACTCCTTCCCATAATTT
           TTCCCCAATCTAGTTTATGCCTAATTTTATACCAGGAATTTCTTCCTGACCTTTTAATTG
           CCTGTCCTTAGGGCATGAAAATTATGAGTGTAATTTTACAGACCATTCTTAACTTTTCAA
           AACCATTCCAACGATATTCATCTAAGAAATGGCCAGTGTTTGTGGAGCACTAATTTGTCA
           CGCAGCATTGTGCTAGACATTCAAGATATCCCATTGAGTATCGCACGAAAACCCTGACCA
           [A,G]
           CACATCCCTATACCAACTAGGTCAGATCCTCATTCACAGGTATTCATAATACATAAAATT
           CCCCTGCATAGCACTAGGTCACATGTAGGCAATAATTATTTATCTTGTATATGCCTTTTC
           ACTCAACTGTGAGCTCCTAGAGGACATAGGTAAAATCTGTTTTGTTCACTGCTGAATTCC
           TAGAACCCAACATAGTATCTAGCACCAAGAAGCACTCAATAGAAGTTGGATGAACTAAAG
           AAGAAATGGTTGGTCTAGGAAGGGGTTGGGACCATAAGAAGCATACTGTTATTTAAGAAG

  104061   GAGAGTGTCCCTGAAACTAGTAGATGGCTCTAGATTCCATTGAATTCCTGCCAAGGGGCC
           TGACAGCATAGATGAATTCTACTACTTCCAGCTTCCTCTAGAGTTAGCAGAGTCCAGGTT
           TGGGAGTCAGGAGACCCAGATTCTAGTCCTGTCTGTGCCGTGGTCTCTTTGTGGTTTTGA
           GCATATCACTTTATCTCTTGTATCCTCAGTTTCCTCTTGTGTAAAAAGGAGATTTTTCTC
           ATCACTAGTTGGTAGGACAAGGACATTTTTAATTTATTTTTTCTCCCTAAATAATGCATG
           [C,T]
           ATAACTTACAAAATCAAATGTTACTTCAAGTCATAAGACAAAATTCAACATTCTCTTCCC
           TCCTCCCTTTCTATCTTGGATTCCAGCTCTCATAGGGGATCACTTTAGGCTCTCTTAGCT
           GTTTCTTCTGATATTTTACCTTTGTATCTCTTGTATTGCCTGTTCTGGTTTGGGCTGCTA
           TAACAAATACTATAGACTGGGTGGCTTAAACAAAAGATGTTTATTTCTCAGTTCTGGAGG
           CTGGGAAGTACAAGATCAATGTGAGGCCAATTTGGGTCTTGGCAAAGACCTGCTTCCTAG

  107552   TATAATATAATATATATATAATTAATATATATAATATAATGTAAATACGGTCTACATCTT
           AGAAATAGTTCTTTAGTCCTTTACTAACTAACAAAGTGCTAGACACAGAATGCTGGGCAG
           GCACATAGGATTGGAACACTAAATACTTCTTTGGCTAACTTAGTGCTTTTAAATATATAT
```

FIGURE 3, page 96 of 122

```
TCAGTCATTTCTAAATTCCCAGTGTCATGTTCCATGAGAGGTCACATAGATGCATAAAAG
CTCCCTCAAGGACTGTAACCTTATTAGGGAAATACACATATATAGACAATAAAAAAAAAA
[-,A]
CAGGTCAACACTGTCACTAAGTAGCAAATTATGTCATTTTCATAGTTTAAGAGTGACAGA
TTTCATGGCCTGAGTGATCAATTTGGATGCATCCATCATGGCTGGCATCCCAGAAAAGGC
TGGGAATGATTTAGACAGAGTGAAATGAGAGAGTCTTTTAACCACACAGGGTATAACAAG
TATGCATCTATTCTTTTTGGAATGTTTAAAAATTATCAAATCAGAAGCATCTTAAAATTC
ACTTTTCTTTGAAAAATGTATGCAAGATCCAGCCACTTTATTTTTGTTCATATTTGGTTT
```

110789
```
CATGCCATTCTCCTGCCTCAGCCTCCCGAGCAGCTGGAACTGCAGGCGCCCGCCACCACG
CCTGGCTAGTTTTTTTGTATTTTTAGTAGAGATGGGGTTTCACCCTGTTAGCCAGGATGG
TCTCGATCTCCTGACCTCATGATCCACCCACCTCAGCCTGCCAAAGTGCTGGGATTACAG
GCATGAGCCACTGTACCCGGCCAGGGCTGTTGATTTTATATAATTTCCTTCCTTTTTGGC
TGATTGAAGTCCATTGCTAATTCTAGTTTGACACTTTTTATTACCTCAACTAGATTATTT
[T,C]
GTCCAGAAAGTTTACTGAGCATCTTCTAGGCTAAGCACTTTAGAAAGTATGAAAGAAGTT
TAATTCACAATACTTATCCTAAAAGATCACAATCTTGCTGATGGCACTTAGACAGTACAG
CAATCCCTTGATATCCACAGGGGTTTGGTACCAGGACTCCTACAGATACCAACATCTAGG
TATGTTTAAGTCCTTTATATAACATGGCGTGGTGTTTGCACATAACCTAGGCACATCCTC
TCACATACTTTAAATCATCTCTATATTACTTATAATACCTAATACAATGTAAATACTATG
```

110884
```
GGTTTCACCCTGTTAGCCAGGATGGTCTCGATCTCCTGACCTCATGATCCACCCACCTCA
GCCTGCCAAAGTGCTGGGATTACAGGCATGAGCCACTGTACCCGGCCAGGGCTGTTGATT
TTATATAATTTCCTTCCTTTTTGGCTGATTGAAGTCCATTGCTAATTCTAGTTTGACACT
TTTTATTACCTCAACTAGATTATTTTGTCCAGAAAGTTTACTGAGCATCTTCTAGGCTAA
GCACTTTAGAAAGTATGAAAGAAGTTTAATTCACAATACTTATCCTAAAAGATCACAATC
[T,C]
TGCTGATGGCACTTAGACAGTACAGCAATCCCTTGATATCCACAGGGGTTTGGTACCAGG
ACTCCTACAGATACCAACATCTAGGTATGTTTAAGTCCTTTATATAACATGGCGTGGTGT
TTGCACATAACCTAGGCACATCCTCTCACATACTTTAAATCATCTCTATATTACTTATAA
TACCTAATACAATGTAAATACTATGTAAATAGCTGCCACACTTTATTATTTTGATTGTTA
TGTTGTTAATTTTATTTTTAATATTTTCAATCTGCAGTTGTGAATCTGCAAACGTAGAAC
```

115075
```
AGGCTGCATAGTATTCCATGGTGTATATGTGCCACATTTTCTTAATCCAGTCTATCATTG
TTGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAGTGCCACAATAAACATAA
CGTGTGCATGTGTCTTTATAGCAGCATGATTTATAGCCCTTTGGCTATATACCCAGTAAT
GGGATGGCTGGGTCAAATGGTATTTCTAGTTCTAGATCCCTGAGGAATCGCCACATGTGC
CCTAAAACTTAAAGTATAATAATAATTAAAAAAAAAACAGTTACCAGTATTTATTGAGTGC
[C,T]
TAAGGTAGTAAAGGCTTGAGAAGCTGGAGCCTATTTTCATACCGAATATGTAAATATCGA
CATCTCTGCTCTAGAAGATCTAGGACACTCTGGAAAAGTGTCTGTATATCTTATATTAGG
AGTAGTGGCCTCACCAATGTGGTGTCATGGTTAGTAAAGGACAGGCTGAGTGAACAAGAA
GGGACTGATCATGTCTTTGCCAGTTGCCACCGCCTAGCTACGTTCTTGGGCATGGGACCT
AATTTGTCCAGCCTCAACTTTCATCTGTGTGACAGGTCCAATAATTCCCCATACCACAGG
```

115286
```
CTAGATCCCTGAGGAATCGCCACATGTGCCCTAAAACTTAAAGTATAATAATAATTAAAA
AAAACAGTTACCAGTATTTATTGAGTGCCTAAGGTAGTAAAGGCTTGAGAAGCTGGAGC
CTATTTTCATACCGAATATGTAAATATCGACATCTCTGCTCTAGAAGATCTAGGACACTC
TGGAAAAGTGTCTGTATATCTTATATTAGGAGTAGTGGCCTCACCAATGTGGTGTCATGG
TTAGTAAAGGACAGGCTGAGTGAACAAGAAGGGACTGATCATGTCTTTGCCAGTTGCCAC
[C,T]
GCCTAGCTACGTTCTTGGGCATGGGACCTAATTTGTCCAGCCTCAACTTTCATCTGTGTG
ACAGGTCCAATAATTCCCCATACCACAGGGATGTTGTGATGATTAAATGATAAGCAGAGA
TTTTAGTACAGGATTGGATATATAGTAAGCTCTCCATAAATGGTAATACTATTACTATAC
ATATACATGTATTTTACATACCTATATATATTTACATACATTTATGATCTAGTTTATAAT
CTCCAATATGCCTTGGAAGCTTCAGAATGAGTCTTATTTCATTTTTGTAATGTTACTATC
```

121154
```
GAGTATTCGTCCAAATTACATAGTCTTTCATTAACACAAGAGGAAGTCCTGTTCCTGATC
TTGAAAAAAATGATAGATATGTCCACAATAGGCTGAAACAAGGCAGTGATTCTCCCTTC
ATATGAGGAATACATTCTCCCACAATGTCCAGCTAGCCTCCTTCTCATTCACCTTAGCCC
AGTGACTTTGGCATTTGGGATTCAGACTCTTTTCCTTTTTTTTTTTTTTTTTTTTTTTGA
GATGGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGAGCAATCTTGGCTCACTGCA
[G,A]
GCTCCACCTTCCGGGTTCAGGTCATTCTCCTGCCTCAGCCTTCCGAGTAGCTGGGATTAC
ATGGCCCACCACCACACCCAGCTAATTTTTGTATTTTTAGTAGAGACGAGGTTTCACCAT
GTTAGCCAGGATGGTCTCGATCTCCTGACCTTGTGATCTGCCGGCCTCGGCCTCCCAAAG
TGCTGGGATTACAGGCATGAGCCACCGAGCCCAGCCCAGACTCTTTTCTTAAATATTCCA
ATAAGGTACAATTTGATCATCCTAGGTTTCTTTCCTCAAGTCTGGCATGATATGGTTGG
```

121250
```
AACAAGGCAGTGATTTCTCCCTTCATATGAGGAATACATTCTCCCACAATGTCCAGCTAG
CCTCCTTCTCATTCACCTTAGCCCAGTGACTTTGGCATTTGGGATTCAGACTCTTTTCCT
```

```
          TTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCA
          GTGGAGCAATCTTGGCTCACTGCAGGCTCCACCTTCCGGGTTCAGGTCATTCTCCTGCCT
          CAGCCTTCCGAGTAGCTGGGATTACATGGCCCACCACCACACCCAGCTAATTTTTGTATT
          [T,G]
          TTAGTAGAGACGAGGTTTCACCATGTTAGCCAGGATGGTCTCGATCTCCTGACCTTGTGA
          TCTGCCGGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGAGCCCAGCC
          CAGACTCTTTTCTTAAATATTCCAATAAGGTACAATTTGATCATCCTAGGTTTCTTTCCT
          CTAAGTCTGGCATGATATGGTTGGTAAATGGAGGTTAACTATTTTATTATTTTGCTAGAG
          AAGAACTCCTAAAGCCCCTATGGGGTTGGCATCATTCTACTGTCTGCATGCCTGGAAGAT

124478    TATTTCCTTATCAGAAAAGAACTTTGCATAATCCGTAAGGGACTTCTTCTACTTCCCATT
          CCACTGAAGAACTTCAATTTAGTATTTTACCCAGCATTTGCTGCAAGCTTCGTAGGATAC
          CCAGCCACACATACCCATATCAGCAGCAAGTTCTGAGAGCCAGCGGCAGTATTAGCATTA
          TAAAGTGTTTCCAGAGTTGGACCAGTGTGTGCTTCCCCTTCATAAATCCTTAAATCTTAG
          GCTCACTCAGCTGGAAAAAAAAAAAGAAATCTGGGTTTGAAGAACACTTATTTATTTTT
          [G,T]
          ATTTTCTCTGCCTTGTGTGCTTCTTTTGACTGCGCATCTGAATATCAAGGCAAGAAGTGC
          TCAAGTTCCTCTGGGCTCTGGAAGGCTGGAACCAATTGGTATTCTTGGAGTCGGTCCTTT
          TTGGACTAAAGCTCCTTTTTCTTTTCCTCCCCCCAATAAAAATTTCTGTTCCAGGGAGTA
          CTTTCTCAGTCACTCCTTTCCTAATGTAATTCTGTTTGATTTCCACTGAACGGCTCCTGA
          AAGGAGACACTGAACCATGCCTCCACAAGCATTTCAATTCCTCAACACCAGCTTTCAGGC

124841    AAGTTCCTCTGGGCTCTGGAAGGCTGGAACCAATTGGTATTCTTGGAGTCGGTCCTTTTT
          GGACTAAAGCTCCTTTTTCTTTTCCTCCCCCCAATAAAAATTTCTGTTCCAGGGAGTACT
          TTCTCAGTCACTCCTTTCCTAATGTAATTCTGTTTGATTTCCACTGAACGGCTCCTGAAA
          GGAGACACTGAACCATGCCTCCACAAGCATTTCAATTCCTCAACACCAGCTTTCAGGCAG
          GAGCAGTTCCAGATGCATTTTTATATCCAGTAATCATGCATTTAACCAAAATGATTGATG
          [C,T]
          AGCATTTTTTCCCCTCTCTATCATTTCCAGTCCATTAGTCTTATTTGTTTTCCATGGTTT
          GGGTTCCTGCCAAATCAGTGAATATACAAATACTTGCATAAGTCATGCACATCTACACAC
          ACATACATGTAATAGGTACTGGGTCTGTATCTGAGTTGAATATTCAACATTTTATTTCCA
          GGCTTCATGTCTCCACTGAAGTTTTAGCCGCTTCTTTCCTTCTTTCTTACTTCCCTCTCT
          CCCTTCTTTTTTTCCCTCTCTTCCTCTCCTTTATAGTCTATTAAGTTGGTGCAAAAGTAA

124842    AGTTCCTCTGGGCTCTGGAAGGCTGGAACCAATTGGTATTCTTGGAGTCGGTCCTTTTTG
          GACTAAAGCTCCTTTTTCTTTTCCTCCCCCCAATAAAAATTTCTGTTCCAGGGAGTACTT
          TCTCAGTCACTCCTTTCCTAATGTAATTCTGTTTGATTTCCACTGAACGGCTCCTGAAAG
          GAGACACTGAACCATGCCTCCACAAGCATTTCAATTCCTCAACACCAGCTTTCAGGCAGG
          AGCAGTTCCAGATGCATTTTTATATCCAGTAATCATGCATTTAACCAAAATGATTGATGC
          [A,G]
          GCATTTTTTCCCCTCTCTATCATTTCCAGTCCATTAGTCTTATTTGTTTTCCATGGTTTG
          GGTTCCTGCCAAATCAGTGAATATACAAATACTTGCATAAGTCATGCACATCTACACACA
          CATACATGTAATAGGTACTGGGTCTGTATCTGAGTTGAATATTCAACATTTTATTTCCAG
          GCTTCATGTCTCCACTGAAGTTTTAGCCGCTTCTTTCCTTCTTTCTTACTTCCCTCTCTC
          CCTTCTTTTTTTCCCTCTCTTCCTCTCCTTTATAGTCTATTAAGTTGGTGCAAAAGTAAT

128941    CAATTCACAGCATTGCCAAGAAAGACTGTAGATATTCAGGGATGAGAGTGAGATTCCTAT
          GAGCCAGAGAATCAAAAGCTCTGTAAATTAGTGAGTTCGTGATATCATGCTACGCTCCTG
          TTTTTAAGAGCTAGATATCAAAATAAATGGTCCAGTGTATGTGCCTGATGGCTATGTCTT
          TTCCACTGTACACACAAGTAAGGATTCTGCATGGTGACTATCATTTTGTTTTCAGGAAGTA
          GATGAATCAGCCGTTTGGTTCCCTGGGAATGTGGGCTGCTGGCTTTTAATTCTTTTTGGG
          [G,A]
          AAGATTTCTATGTCATCAGCCATCTTGTTTATCTGGAAACATGGGACAAACGTTGGCTCT
          CTTTCTACCTATGTAGTCCTTTGCTAGGGTTGTACAGCTTGAGTAGAATTGGGAAAAGTG
          ATTTGGATCCTTGTGACTGGGATTAGGGAGAATTGGTACATGAGTATACAGAATCTTTTC
          ATTGATCTCCTTGCCTCTGACCTTGATTTAGCCACCTACTTTCAGTGGATAAGGCCCTAC
          AGAACAAACCAACTGAAGCATACTTTAGGATAGGCCACACCTCTAATCTCATATTTATTA

129471    TAAGGCCCTACAGAACAAACCAACTGAAGCATACTTTAGGATAGGCCACACCTCTAATCT
          CATATTTATTATGACCAACTAAAAACTGCTTATCCTTCTCTTTATGTCTATTATTTAACT
          TTCCCCTCCTCTCTACCTTCTTTCCCTTAAGTCCTTCTGATACACTACATGCTCCTGCCA
          TTGTGACTATGAGTCTAAAAAGCTGGTGGCATTACCCACCTTCCCCTCCACCTTCAAAAC
          TCACATGTACACCATGCTTTGGGCTTCTCTGATTTGGCTCACTATTTCTTCAACTTAGAA
          [C,T]
          GCCCACTTTCTATTATGATCATTAAAAGATCCTGGATTTATGTGTGGGGTGGATGTAGTA
          ACAACTGGGAAATAGCATAAAATTATTTGGTTTCTTGTATGCTGGTTTTCTTCCCAGAGG
          TAACCTGTTTGGTTTGACGTTTGGCTTAATGTTGTTAATTTGACGAAGGTGGAAATGGAT
          GGGCTAGAAATCTTTGTGGGACTAGGATAAGGCTTGAATGGTCTAATCTAGGGATTCAAA
          CTTTCTAGTTAAGAATGTACAACCTGTGAGGATAAATTTGCATTTTATTCTACATATATCC

130568    AATAGAAAGAAGTATAAAATACAGTGCCTAGGTCTGCAAGTATTTATTACCTGTGACACT
```

```
         ACTATGTTGGCCAAGGAGAAGTTCTGTATATTATGCTCTTTTTATAAAAGCAGAAGCATG
         TATAGAAACTATTAGGATATTTTTCTTCAAAATGTTTAAAATTCTTTAGCTGCTTACAAG
         AGAAATTTATTTAGTACTACTTTCTCAAAGATCCCATTTCCTGACAATGCTAATAATGGA
         GGCATTTCAAGATAATGACCTCATAAAATTCACACAACTGTCTGTCTGTGCAGACTTAGA
         [T,C]
         AGCACAGTCATGACCTCACTTAGGTCAGGGACAGATCTTAGCTTGATAGGGCAATGGTCA
         GAAATGCAGTTTGGTTTAAACAGTTTTTTCCTCTTCTCTGTTGACTCATTTAATGAAAGA
         AAGTGTCTCATTCAACCTGCATATTTTTTTCAAAGATTCCACAATGATGGGGCCATGTCT
         CCTATGAGTTATTATACAAAATGGACACTGAGTCCTGAGGTACATTAGGAAGCCCCAAAC
         TTATCCTTGTATTTAATTCATTTGAACATTTTGGATATTTTATTTTATCAAGCCAGTCAT

132179   CACTTAAAGGAACACCAAATCATTTGAGTGCACAGGCAATGACACCATCTGTAGACTTAT
         CTGATCCAGAGAACCTGAGGTGGAGCCTATAGCCTCTGGTCAGTTGGAAGCGGTGGGGAA
         ATCTCAAGAACACTTGTCCTGAGAGAAAGAAAACTTTATCTGCTTGTTACACATGAGCCT
         GAGCTGAGGAAATAGACCTGGATCCAGGGAATTCGTGTTTACTGGGTGCCACAACTTGTG
         TTAGCACTTGACATGATTTCTTCTATTTAAATATTAGACTAAAAACACTCTATCAGACTA
         [G,C]
         GGTTTTAAAATACTATTTCATTTTTTTGGTACCTATTTATAAAATGGGGAAACTGAGTCT
         TGGGGGATATTAAGGTCTTATAGACTGTAAATGGTATAATCCAAGGTTGAAAGGTTTCCT
         GACTCTAATGCTGGTTCTCTTTCACAATACCTCATTGCCTTCTGGAAGTTGTAGTTCCTA
         CCCTAGTTCTGCCTTTATTTGGCTGTGGTAATCAAAACAAATCACTTAAGTTCTTGAATC
         TCATTTTGTTCTTCTGTTAAATATCACAAAACCAACCAACCAACCAAAACAGTGAGAATA

132792   GCTTCCATGATTTGTGGATGGTCTTCACAGGCAACAATTAATTCATGAGGAATGATGCCC
         ACTGCTGTCATGCAACATAGTGGCCCTGGATTTTAAGGAATCCATGTATTAATACATGCA
         ACCTGAAATCACATATGTAAATTGTATTATATACTTGCATATCTATATTGTTTTAGAGAA
         GAGGCTAAAGCTTTCTTGAGAGGCTTTCTGTGGCATCTATATCCCCAAATTCCTAAAAAT
         CATTAGGTTCTTGGCAGCTCATTAAGTGATTAGTAGGTCTCCTTATGATGTGTTATAACT
         [C,G]
         AAAACATCAGTAACCATCTGAAAGAAATTAAGGTTTAGGACAGGCATGGTGGTACACACC
         TGTAATCCCAGCATTTGGGGAGGTAAAGATGGCAGTATCGCTTGAGGCCAAGAGTTTAAG
         AACAGCCTGAGCAACACAGTGAGACCCTATCTTTACAAAAAATTTAAAATTGTTATTAAA
         AGAAATTAAAGTTTAGTACATGAAAGCAGCTGAAACTCAGAACTGACCCTTACATCAGAA
         ACCATGTGGTATCATGGAAAGAAATCTGGCAAAGAATCAAAGATTCTGGGTCCTACTTTA

133502   AAAAGAATCAAATGTGATAATATGGATGAAGGCACTTTGGCAAAATATGAAGTACCCTGC
         AAAAGTCTGATATTAACCATGAGATATTAAAGTATCAAGTCATTTCACTAGTTGTCAACT
         GAGAAAAAGGGAAAATTGCAAGTTCCATCAGCAAAATTTAGAAGCCTTGCTTTTTCATTC
         CTTCAGCAAGGTCCTACAGCTGATATTTATGCATAAATTTTCTTGACTTTAATGAGAATT
         GGTTGCAAATACACCTTACAGGATTCAAATGGAGATCATCACCATTCTAGGAGCTGCTAA
         [A,T]
         CAGAACATGTGGCTTCTTCTCTAGCCAAGAGTTCTCCTCTTTTATCACCTTTATTTTATG
         ATCAGTGGTTCTCAAGGAATGGTCAAGCACCAGCAGCGTGAGCATCTTCTGGGAATATGT
         TAGAAATGAAAATTCTCGAGCCCCATCCCAGACCTACTAAATCAGAAATCCTGGAGGTGG
         AGCCCAGCAGGCTGTGTTTTAACAAACCCTTAAGAGGATTCTGATGCCCTGCACACTTAA
         GTGTGAGAACCACTGCCATAAGTGAGTATCCTTGGAGAGACCTACTTTGGTCCTGGGTAC

133661   AGAAGCCTTGCTTTTTCATTCCTTCAGCAAGGTCCTACAGCTGATATTTATGCATAAATT
         TTCTTGACTTTAATGAGAATTGGTTGCAAATACACCTTACAGGATTCAAATGGAGATCAT
         CACCATTCTAGGAGCTGCTAAACAGAACATGTGGCTTCTTCTCTAGCCAAGAGTTCTCCT
         CTTTTATCACCTTTATTTTATGATCAGTGGTTCTCAAGGAATGGTCAAGCACCAGCAGCG
         TGAGCATCTTCTGGGAATATGTTAGAAATGAAAATTCTCGAGCCCCATCCCAGACCTACT
         [A,G]
         AATCAGAAATCCTGGAGGTGGAGCCCAGCAGGCTGTGTTTTAACAAACCCTTAAGAGGAT
         TCTGATGCCCTGCACACTTAAGTGTGAGAACCACTGCCATAAGTGAGTATCCTTGGAGAG
         ACCTACTTTGGTCCTGGGTACTTTAAGGAAAATCGTGGGGCCCCAGTAATCCAAAAGAGT
         ACCTCATCTAAGTCTCTGAAGGGCTGATGTTAGAGCAAAGGTTGGGCTAGTGAATGTCAA
         TGTTAGCAAACATGGTGGGTGTGACCCAAAACATAATCAAATAGGCCTCTTAGGTTAAAG

133768   AAATGGAGATCATCACCATTCTAGGAGCTGCTAAACAGAACATGTGGCTTCTTCTCTAGC
         CAAGAGTTCTCCTCTTTTATCACCTTTATTTTATGATCAGTGGTTCTCAAGGAATGGTCA
         AGCACCAGCAGCGTGAGCATCTTCTGGGAATATGTTAGAAATGAAAATTCTCGAGCCCCA
         TCCCAGACCTACTAAATCAGAAATCCTGGAGGTGGAGCCCAGCAGGCTGTGTTTTAACAA
         ACCCTTAAGAGGATTCTGATGCCCTGCACACTTAAGTGTGAGAACCACTGCCATAAGTGA
         [G,T]
         TATCCTTGGAGAGACCTACTTTGGTCCTGGGTACTTTAAGGAAAATCGTGGGGCCCCAGT
         AATCCAAAAGAGTACCTCATCTAAGTCTCTGAAGGGCTGATGTTAGAGCAAAGGTTGGGC
         TAGTGAATGTCAATGTTAGCAAACATGGTGGGTGTGACCCAAAACATAATCAAATAGGCC
         TCTTAGGTTAAAGTCCTGATGTTAGGTTTGCTGGTTGAGAAGGAATACAAATGTATCTCA
         AGGAATGCAGTTCTCTCAAGATTCAGAAAGTATGGATACCTTTGCCATGCCTGGCAGCTT
```

FIGURE 3, page 99 of 122

133837 TCCTCTTTTATCACCTTTATTTTATGATCAGTGGTTCTCAAGGAATGGTCAAGCACCAGC
     AGCGTGAGCATCTTCTGGGAATATGTTAGAAATGAAAATTCTCGAGCCCCATCCCAGACC
     TACTAAATCAGAAATCCTGGAGGTGGAGCCCAGCAGGCTGTGTTTTAACAAACCCTTAAG
     AGGATTCTGATGCCCTGCACACTTAAGTGTGAGAACCACTGCCATAAGTGAGTATCCTTG
     GAGAGACCTACTTTGGTCCTGGGTACTTTAAGGAAAATCGTGGGGCCCCAGTAATCCAAA
     [A,C]
     GAGTACCTCATCTAAGTCTCTGAAGGGCTGATGTTAGAGCAAAGGTTGGGCTAGTGAATG
     TCAATGTTAGCAAACATGGTGGGTGTGACCCAAAACATAATCAAATAGGCCTCTTAGGTT
     AAAGTCCTGATGTTAGGTTTGCTGGTTGAGAAGGAATACAAATGTATCTCAAGGAATGCA
     GTTCTCTCAAGATTCAGAAAGTATGGATACCTTTGCCATGCCTGGCAGCTTGAAAGAAAT
     AGCAATGTAAAGTTAAACCACGCCTATGTGAAAGTTAGCTCCATAGCAGGCTTTCTTCTC

134003 AACAAACCCTTAAGAGGATTCTGATGCCCTGCACACTTAAGTGTGAGAACCACTGCCATA
     AGTGAGTATCCTTGGAGAGACCTACTTTGGTCCTGGGTACTTTAAGGAAAATCGTGGGGC
     CCCAGTAATCCAAAAGAGTACCTCATCTAAGTCTCTGAAGGGCTGATGTTAGAGCAAAGG
     TTGGGCTAGTGAATGTCAATGTTAGCAAACATGGTGGGTGTGACCCAAAACATAATCAAA
     TAGGCCTCTTAGGTTAAAGTCCTGATGTTAGGTTTGCTGGTTGAGAAGGAATACAAATGT
     [A,G]
     TCTCAAGGAATGCAGTTCTCTCAAGATTCAGAAAGTATGGATACCTTTGCCATGCCTGGC
     AGCTTGAAAGAAATAGCAATGTAAAGTTAAACCACGCCTATGTGAAAGTTAGCTCCATAG
     CAGGCTTTCTTCTCTGAGATTTGAATTTATGGAACATGATAACAAATATGAAAATAGATA
     ATTTTTATTGAATATCATATCACTACCACTATTTTAAGTGATTTGTATGTATTAATGGCT
     AACCTTTTTTCAGGTAGTTACTCCACCAAGCTCTTTGCTGGGCCCTGAAAATGTAACAGT

134098 GGTACTTTAAGGAAAATCGTGGGGCCCCAGTAATCCAAAAGAGTACCTCATCTAAGTCTC
     TGAAGGGCTGATGTTAGAGCAAAGGTTGGGCTAGTGAATGTCAATGTTAGCAAACATGGT
     GGGTGTGACCCAAAACATAATCAAATAGGCCTCTTAGGTTAAAGTCCTGATGTTAGGTTT
     GCTGGTTGAGAAGGAATACAAATGTATCTCAAGGAATGCAGTTCTCTCAAGATTCAGAAA
     GTATGGATACCTTTGCCATGCCTGGCAGCTTGAAAGAAATAGCAATGTAAAGTTAAACCA
     [C,-]
     GCCTATGTGAAAGTTAGCTCCATAGCAGGCTTTCTTCTCTGAGATTTGAATTTATGGAAC
     ATGATAACAAATATGAAAATAGATAATTTTTATTGAATATCATATCACTACCACTATTTT
     AAGTGATTTGTATGTATTAATGGCTAACCTTTTTTCAGGTAGTTACTCCACCAAGCTCTT
     TGCTGGGCCCTGAAAATGTAACAGTGAACAAGAAAAAAATCTCTTTCCTCAAGGAACTCA
     CACTTCAATGAAGGGAAATTAGAAGAAATTAGCCTATTACTGTTCAAGTTCAGGGTGTTT

134530 ATGTATTAATGGCTAACCTTTTTTCAGGTAGTTACTCCACCAAGCTCTTTGCTGGGCCCT
     GAAAATGTAACAGTGAACAAGAAAAAAATCTCTTTCCTCAAGGAACTCACACTTCAATGA
     AGGGAAATTAGAAGAAATTAGCCTATTACTGTTCAAGTTCAGGGTGTTTGCAGAGGCCTA
     GATGCGGCACCTACACTCAGTCTTATGTAAATAGAGGTTTCTCAAAGGAAGAAATGTATA
     AATTTAGACCTCTGTAGAGTGAGAGGAGTTGATCACTTTAGAGTGGAGAAACAGATTTAG
     [G,A]
     ATAACTATACTCTAGATCACACAGCAAGTAAGTGATAGTGTTGGGATTTGAACTCAGGTT
     GGTTTCATCCAAAGCCATTGCTTTCAACCATTAAGGCAAGGGCAGAAAATGGGTTTTATC
     AAGCCTGTCAATTCTGACAAATTAATAATGGCTTCCAAGAATGTGGATGGTGAATACTCG
     GTGAGCACTGGGCTCAATTGGAAAAAAAAATGCCATGATTAATTAATAATGTCTTCCCTG
     GGTTCAGAGAGGAGGGTGTATGTGTCATGCATTTGCCTACCCTGCAGTACAGAGTACTGC

134746 GTTTCTCAAAGGAAGAAATGTATAAATTTAGACCTCTGTAGAGTGAGAGGAGTTGATCAC
     TTTAGAGTGGAGAAACAGATTTAGGATAACTATACTCTAGATCACACAGCAAGTAAGTGA
     TAGTGTTGGGATTTGAACTCAGGTTGGTTTCATCCAAAGCCATTGCTTTCAACCATTAAG
     GCAAGGGCAGAAAATGGGTTTTATCAAGCCTGTCAATTCTGACAAATTAATAATGGCTTC
     CAAGAATGTGGATGGTGAATACTCGGTGAGCACTGGGCTCAATTGGAAAAAAAAATGCCA
     [T,C]
     GATTAATTAATAATGTCTTCCCTGGGTTCAGAGAGGAGGGTGTATGTGTCATGCATTTGC
     CTACCCTGCAGTACAGAGTACTGCCTCCAGGACTTAGCACGAGAGGATGAAATCTGCGGT
     TGTTTCTTATTCATGTAAGAGTGTCTATGACTTCAAGGAACCTTAGAGCTCAATGGCATC
     AGCAGGGGCTTATTATATGTTAGCAAAGGTAGCAAGTGACAGCCCAGGATGGAGCATTCA
     GTAAAAAAGAGAATAAAGTTTCCTGTCAAAAGAGAAGCACTAATTAAGTTTAACAGTGA

135854 TGCTTGGAAATGGCTTCTGGATGAATTTCCTTTGCAAAAAGTCTCTTTCACTTTCCCCAG
     CTCACCTTCACATTTAACCGTAATAAGCACTCTTTACTCTAGACATTTAACAGATGTTTT
     TAAATAACTCAGTTATTGGGTATATAAAAAGAAGAAGATGACCTCCCCAAAAGTCCCAAG
     GTCAGAGCTATTTGCCATCTGAGCAATTGTCCCCAGGAAGAATGTTGTGAATGATCACTT
     CTCTCTAACCGTGACTCAGCACAGCACACCAACCTGCACCCATTTTCAGAGGCTCACCTT
     [G,T]
     GGTTGAGGGTGACTTTGAGTATATGGGCCTCAGCAGTCACCGCCCAAGGGCTGTGCCTGC
     TTGTCATGCTTCTCTATCACCCCACCCACCTGCAGCCATCAGAGAGGACCAGTTTCTCAC
     TGATCCTCCTCCCCTGATGCATTTACATGAGAGATGGGGGAGGAGCTTTCCCCCTTGAGA
     CTTGTTCACCTTGTTTTACTTTGGAAGACAAGATTTTACAGTACCAGGAATCAAAACATT
     TCTCTGATCACGTCATGCTGACCAGTGCTAAATTATCTCTGATTCATTGTACATTTTACA

```
136893   ATATAAGTCCCTAGTACATCTCTATTTTTTTTTTTTAGCAATATTGCTGCTGAAGCTTAGCT
         GTGTGCTCTCGTGTGTCCCATCCTGCTCTTTCTGCCTCAGGTGTGTGGTCTAGTTAATCC
         TCCATTCCATGGGAGAAACATAGCCCAGGAATGCTGGTTGTGAGGAGATTTGATTTCTAC
         TCCTACTTCTGCCATTAACTGTATGACTTTGGGCAAGGCTCTTTCCTGGTCCCAGCCCAG
         CCCCAGCTATTCAGCATCCATTTAGGATAGGTTGGTCTCTAAGGAGCCTTTCTAGCCCCA
         [G,A]
         CATTCAAGGACTTAGTGGAAACTAGAATTCTGGGTTCAGTTGAGTTCAGTGCCACCGGCA
         TTTGCCGACTGACTTCCTCTTTGTCATCAAGCACCATACGGGGCACTGCAGGGGATATGT
         TTATATCAGAGCTCTCTCTGATACCACGGCACTCACGGGCAAAGGGAGAGTGGGATGAGA
         AAAACAAGTGTATTGATATACCAGTGCAGAGCAGACTATGTTGTATGCTGGAAGCAAAGT
         ACAAATGATTATAGGGTCCAAAGGAAGCAGAAATTTCATTTATTTATGAAAAGTCAGAAT

136945   GCTTAGCTGTGTGCTCTCGTGTGTCCCATCCTGCTCTTTCTGCCTCAGGTGTGTGGTCTA
         GTTAATCCTCCATTCCATGGGAGAAACATAGCCCAGGAATGCTGGTTGTGAGGAGATTTG
         ATTTCTACTCCTACTTCTGCCATTAACTGTATGACTTTGGGCAAGGCTCTTTCCTGGTCC
         CAGCCCAGCCCCAGCTATTCAGCATCCATTTAGGATAGGTTGGTCTCTAAGGAGCCTTTC
         TAGCCCCAGCATTCAAGGACTTAGTGGAAACTAGAATTCTGGGTTCAGTTGAGTTCAGTG
         [C,A]
         CACCGGCATTTGCCGACTGACTTCCTCTTTGTCATCAAGCACCATACGGGGCACTGCAGG
         GGATATGTTTATATCAGAGCTCTCTCTGATACCACGGCACTCACGGGCAAAGGGAGAGTG
         GGATGAGAAAAACAAGTGTATTGATATACCAGTGCAGAGCAGACTATGTTGTATGCTGGA
         AGCAAAGTACAAATGATTATAGGGTCCAAAGGAAGCAGAAATTTCATTTATTTATGAAAA
         GTCAGAATAAAACTTCATGGCATTTCAGATCAGCCTTGAAAGAGAAAATTCAAACAGGAT

137997   TTTTAAATGATTAAAAGTTCTAGATGATTTTAAATAGGAGAGAAAAGCAGAGGAGCTGAT
         TGAGCAAATGCTGAGAGGAGGTAAAGTGTGGGACATATTTAGGGCAGAGTGATTATTCAG
         TATTAGGGTCTCTTCTCCACAGTTTGAGAGGTTCCCACCTGAAGTCTTGTTCCATCTCAT
         CTCTTCCAGCTATGCCAGGCCTTGACTCTGCTCTCTCTATGTGGAGAATGACAAATCTAG
         TCTCTGTGTGTGTGTGTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
         [-,T]
         ATGTGTTGTGCTGTTGAAGCTGAATGCCAGCACAATTCTCATCAGCATTTGAGTTCATTG
         GCAGCATTTGAAAGAAAGTATAGACCCTTAGCTCTCAGTGCTAATATAGACATTGGCACA
         TTAGTTTCAGCTGAATTAACTCATGTAGGACTGACGCTAAGGGACAGTTAGAGTGGAGTG
         GAAACTTCTCTGCATACAGAAATAACATCTCAGCACTGTCTGTGTAGCAAGATGTATTAT
         CATCATCTTATTGGTACTGGACAAAGCAGGATCTTCAGATGGTGCCCAGCGACTATAGGG

139348   CCCCAGTCAGAATGAAGTCACTAACTCCAGAGTAAAAGAATGGGGCAAGCGATGCTCTCT
         GTAAAGTGAATTCTAATGAGGTAAAAGTGGGCAGGTCTCTACTGGAGGAGAGAGGACAGC
         AGCGAGGAGAGTGGCATGGGAAGTGGAGAGAGCTGCATATGCCCCCACCTCCCCAGTTCT
         CTGAGAGATATTCCACACAGGAATTCCTGACCCTTGCCCAGCAATTGTTCAATGACTCTG
         ACCATGGAAAGCATACGAGAAAAAGTACGCCAGAAAAGTTGTATCATGGTCGGTAGACCA
         [G,C]
         AGACAACAGAGAAACTGGCTGCAAGTCTCAGCATCACTCAGAAAGCCTTTGTTCCCAAGG
         CACTATTAAGTATCAGGCAGACAGAGAGATTCCTGAGACACAGCTCCTGTCCTCACAGGA
         AGGACTCACTGGATAAGATGGGAGGCAAACCCAGGCAGGCTAGCATTGATGCAAGATGCT
         GAGTGCCATAACAAACGTCTAAGCAGCTTGCTTTAGGTGTAGTGTGAAGGGAGGATCAGA
         CATAGTTAATTCTAACACGAGGTAGGAAGTGTTAAGTGTGCTAATAGCAATACAAGCCAA

139437   GGCAGGTCTCTACTGGAGGAGAGAGGACAGCAGCGAGGAGAGTGGCATGGGAAGTGGAGA
         GAGCTGCATATGCCCCCACCTCCCCAGTTCTCTGAGAGATATTCCACACAGGAATTCCTG
         ACCCTTGCCCAGCAATTGTTCAATGACTCTGACCATGGAAAGCATACGAGAAAAAGTACG
         CCAGAAAAGTTGTATCATGGTCGGTAGACCAGAGACAACAGAGAAACTGGCTGCAAGTCT
         CAGCATCACTCAGAAAGCCTTTGTTCCCAAGGCACTATTAAGTATCAGGCAGACAGAGAG
         [A,-]
         TTCCTGAGACACAGCTCCTGTCCTCACAGGAAGGACTCACTGGATAAGATGGGAGGCAAA
         CCCAGGCAGGCTAGCATTGATGCAAGATGCTGAGTGCCATAACAAACGTCTAAGCAGCTT
         GCTTTAGGTGTAGTGTGAAGGGAGGATCAGACATAGTTAATTCTAACACGAGGTAGGAAG
         TGTTAAGTGTGCTAATAGCAATACAAGCCAAGAACTATGAGAGCCCAGCGAAGGATGGAT
         TAATTCTGACTGGGACTCTCACAGAAGAGGTGGTGTCTAAGTGGGACCTTGAAGGATTGG

140321   GTTCAATAAATGATAGTTTTTATTGTCTGTGCTATGACTATTTCAGTGAACATTATCTCA
         GTCTTCTGGGTAGCATCTGAGGCTAATTGGCCACTGTTAGGCAATTTTAAAAGTTAACGA
         AATGCACCTACAACTTCATCTGCATTTGTCCTCTCTTCAGATCCTTGTATATGAGCATCT
         TTGCCTATTCTTGGATCATAGTCTTGCTTTTTTGTTTTTGATTTGTTTGTGGGTTTTTTT
         TCTATACAATAGAGCAAATTATTGATTCCTTTTTATAATTTCCTCTTCCTGTTCTAAAGT
         [C,T]
         CTACCTTGGATGGTCCACTCTTTGTTGTGTGTTCAGATCCAGTAGTGAGTGCAGAAGGAC
         AGTTACCATAGTCAGCCTCTCAGTTAGAATTCTGTCGTGTCTACAGACCAGCTTTGTTCC
         TCTCCTAGTCACCACTATGCTGCTGAGAATCATCATAGAATATGGGAACTGCAGGCAACT
         GCAGCCAAATCTTTTGTTTTACCAATGAGAACCTCCAGCCCAGGGACAGGAAGAAAATTG
```

```
          TCAAGTTTGTACAGAGAGACAGGCAGGGGTGGGCCTGTGTACTAGTCCTCAAGTGTGCTG

140570    TAGAGCAAATTATTGATTCCTTTTTATAATTTCCTCTTCCTGTTCTAAAGTCCTACCTTG
          GATGGTCCACTCTTTGTTGTGTGTTCAGATCCAGTAGTGAGTGCAGAAGGACAGTTACCA
          TAGTCAGCCTCTCAGTTAGAATTCTGTCGTGTCTACAGACCAGCTTTGTTCCTCTCCTAG
          TCACCACTATGCTGCTGAGAATCATCATAGAATATGGGAACTGCAGGCAACTGCAGCCAA
          ATCTTTTGTTTTACCAATGAGAACCTCCAGCCCAGGGACAGGAAGAAAATTGTCAAGTTT
          [G,A]
          TACAGAGAGACAGGCAGGGGTGGGCCTGTGTACTAGTCCTCAAGTGTGCTGACTCACAGG
          CCAGTGCCCTGGATGGTTTGCATGCCCTTTCTGCTTTTCTTCCGCAGACTTAGGCTGTGA
          GGAGGGCAAAAATGCCTTTCCTCCTCCTCATTTCCTCTTCCCTCCCCCTTCCTCCCTGCT
          TTGGGTAAAGCTGAAACATGCAGCTCGTGCTTCCACAAGGCATCCTCAGCATGCTTTTCA
          CAGCACCCTCTGCTGACTCCGGGGCCTTCACAGCTTGCAGCCCAGTTGACAGCCAGTGAA

141441    CACGCATTTATGCATTTGCACTATGTAGTAGGCATTTCTGCCTTGGACTTTTAAAAACAT
          GCTTGCCCTTTAGGATCCTCATCTTGGAAATCTGCCCTCTTCTCCCTCTTTAAGGGATTG
          CCCTTCCCTCTGAATGTGCAGAACATGCTGTTCTTCTACTGCAGAATTTATTTCATTTTC
          TCATGCAATTTTTATTAGTGGCTCATAAGTGTGTCTTTCATCGCATTGGAATGACCCTCT
          TAGAGGCAAGGGTCTTGACTGTTGTTTTCCCCATACTATACCACATACACTATGTTGAAT
          [T,C]
          GATAAATTTACTTATTCAGTGAATGTTTTGGTATTATAATAGACATGTTGCAAGGTAGTT
          TAGCAAAGTGATAAGGACTCATGTGGAATCAGACATACAGGGGTTTGAATTGTAGCTCCA
          CTATTATCAGTTCTGTGACCCCTGCCTACCTATGTTTTAGTCCCTCTTTTGTTAAATGGC
          AATAATAATAAAGTACACCCTCTTAAGCTGTTACAGAGATTAAAAGAATTGATGAAAGTA
          AAATGTGTAGTCTATTTTCTAGCATTAAAGTGCTCAGTATATGCAAGCACCTATTAGTAA

141639    TGGCTCATAAGTGTGTCTTTCATCGCATTGGAATGACCCTCTTAGAGGCAAGGGTCTTGA
          CTGTTGTTTTCCCCATACTATACCACATACACTATGTTGAATTGATAAATTTACTTATTC
          AGTGAATGTTTTGGTATTATAATAGACATGTTGCAAGGTAGTTTAGCAAAGTGATAAGGA
          CTCATGTGGAATCAGACATACAGGGGTTTGAATTGTAGCTCCACTATTATCAGTTCTGTG
          ACCCCTGCCTACCTATGTTTTAGTCCCTCTTTTGTTAAATGGCAATAATAATAAAGTACA
          [C,A]
          CCTCTTAAGCTGTTACAGAGATTAAAAGAATTGATGAAAGTAAAATGTGTAGTCTATTTT
          CTAGCATTAAAGTGCTCAGTATATGCAAGCACCTATTAGTAATTAATGTTAGAAATAATA
          ATGATAATTATCATCATCATCATCATCATCATCATTGTTGCCACTGTGGCTGTGCC
          AGGTTCTCCAGATCCTCAATGATCCCCTTTCTTTTCTTAGATATGTGAGGGAGATAAGCA
          AAGGAATATATTGAAGAGAAAAAGCCCAATGTTTATTACTGCGTGGCTGTTGCTATGCTG

141796    GTAGTTTAGCAAAGTGATAAGGACTCATGTGGAATCAGACATACAGGGGTTTGAATTGTA
          GCTCCACTATTATCAGTTCTGTGACCCCTGCCTACCTATGTTTTAGTCCCTCTTTTGTTA
          AATGGCAATAATAATAAAGTACACCCTCTTAAGCTGTTACAGAGATTAAAAGAATTGATG
          AAAGTAAAATGTGTAGTCTATTTTCTAGCATTAAAGTGCTCAGTATATGCAAGCACCTAT
          TAGTAATTAATGTTAGAAATAATAATGATAATTATCATCATCATCATCATCATCATC
          [A,-]
          TTTGTTGCCACTGTGGCTGTGCCAGGTTCTCCAGATCCTCAATGATCCCCTTTCTTTTCT
          TAGATATGTGAGGGAGATAAGCAAAGGAATATATTGAAGAGAAAAAGCCCAATGTTTATT
          ACTGCGTGGCTGTTGCTATGCTGTGGGCTTCTATGAGCTGGAGGACCCAAGAAAGCTACT
          TTCCCTGTGGCCCTCACCTATTCTTGGCTGTCTGGATCTCAGCACTATGGGGATCAGAAG
          AGGCCACCCCAAAACAATAGGAAATAAAAAGGAATTTTTGCCCAATGCTTTGAACAAGGC

141797    TAGTTTAGCAAAGTGATAAGGACTCATGTGGAATCAGACATACAGGGGTTTGAATTGTAG
          CTCCACTATTATCAGTTCTGTGACCCCTGCCTACCTATGTTTTAGTCCCTCTTTTGTTAA
          ATGGCAATAATAATAAAGTACACCCTCTTAAGCTGTTACAGAGATTAAAAGAATTGATGA
          AAGTAAAATGTGTAGTCTATTTTCTAGCATTAAAGTGCTCAGTATATGCAAGCACCTATT
          AGTAATTAATGTTAGAAATAATAATGATAATTATCATCATCATCATCATCATCATCATCA
          [-,C,T]
          TTGTTGCCACTGTGGCTGTGCCAGGTTCTCCAGATCCTCAATGATCCCCTTTCTTTTCTT
          AGATATGTGAGGGAGATAAGCAAAGGAATATATTGAAGAGAAAAAGCCCAATGTTTATTA
          CTGCGTGGCTGTTGCTATGCTGTGGGCTTCTATGAGCTGGAGGACCCAAGAAAGCTACTT
          TCCCTGTGGCCCTCACCTATTCTTGGCTGTCTGGATCTCAGCACTATGGGGATCAGAAGA
          GGCCACCCCAAAACAATAGGAAATAAAAAGGAATTTTTGCCCAATGCTTTGAACAAGGCA

141799    GTTTAGCAAAGTGATAAGGACTCATGTGGAATCAGACATACAGGGGTTTGAATTGTAGCT
          CCACTATTATCAGTTCTGTGACCCCTGCCTACCTATGTTTTAGTCCCTCTTTTGTTAAAT
          GGCAATAATAATAAAGTACACCCTCTTAAGCTGTTACAGAGATTAAAAGAATTGATGAAA
          GTAAAATGTGTAGTCTATTTTCTAGCATTAAAGTGCTCAGTATATGCAAGCACCTATTAG
          TAATTAATGTTAGAAATAATAATGATAATTATCATCATCATCATCATCATCATCATCATT
          [T,-]
          GTTGCCACTGTGGCTGTGCCAGGTTCTCCAGATCCTCAATGATCCCCTTTCTTTTCTTAG
          ATATGTGAGGGAGATAAGCAAAGGAATATATTGAAGAGAAAAAGCCCAATGTTTATTACT
          GCGTGGCTGTTGCTATGCTGTGGGCTTCTATGAGCTGGAGGACCCAAGAAAGCTACTTTC
```

FIGURE 3, page 102 of 122

```
         CCTGTGGCCCTCACCTATTCTTGGCTGTCTGGATCTCAGCACTATGGGGATCAGAAGAGG
         CCACCCCAAAACAATAGGAAATAAAAAGGAATTTTTGCCCAATGCTTTGAACAAGGCAGG

142186   TATATTGAAGAGAAAAAGCCCAATGTTTATTACTGCGTGGCTGTTGCTATGCTGTGGGCT
         TCTATGAGCTGGAGGACCCAAGAAAGCTACTTTCCCTGTGGCCCTCACCTATTCTTGGCT
         GTCTGGATCTCAGCACTATGGGGATCAGAAGAGGCCACCCCAAAACAATAGGAAATAAAA
         AGGAATTTTTGCCCAATGCTTTGAACAAGGCAGGTCCAAGCTTCCCACCTCAGATCTTCA
         GAGTGAAGTCCCCTCCCTCCCATGCTCAAAGCAGCTCTAGACCTGCACAGCACCCTCAAA
         [G,T]
         AAGCAAATCCAGCAGAGATTTTATGGCTTTAGCACCATCTGGCCTTATCTCCTTAGCTGT
         CTTGAAGGAGACAATAGAGGGTGGAGGAGAAGTAATCATCCTAAAACCAACAGGTGGCCC
         CAGTTGTAGGCTATGTAGCAGCATGGCTGTGGTGGTGGTGGTTGCTTGGTGTATGTGTGG
         AAGTGCAAGGGAAGTCTATAATGCAGTGTTCTGAGTGTGTGCAGAACCTATGGAGGAAAT
         CAGAACTTGAGATAGAGAAACAAGTCCTGTTAATGGTAACGCCATTTGGATCTGGAAATA

142212   TTATTACTGCGTGGCTGTTGCTATGCTGTGGGCTTCTATGAGCTGGAGGACCCAAGAAAG
         CTACTTTCCCTGTGGCCCTCACCTATTCTTGGCTGTCTGGATCTCAGCACTATGGGGATC
         AGAAGAGGCCACCCCAAAACAATAGGAAATAAAAAGGAATTTTTGCCCAATGCTTTGAAC
         AAGGCAGGTCCAAGCTTCCCACCTCAGATCTTCAGAGTGAAGTCCCCTCCCTCCCATGCT
         CAAAGCAGCTCTAGACCTGCACAGCACCCTCAAAGAAGCAAATCCAGCAGAGATTTTATG
         [G,A]
         CTTTAGCACCATCTGGCCTTATCTCCTTAGCTGTCTTGAAGGAGACAATAGAGGGTGGAG
         GAGAAGTAATCATCCTAAAACCAACAGGTGGCCCCAGTTGTAGGCTATGTAGCAGCATGG
         CTGTGGTGGTGGTGGTTGCTTGGTGTATGTGTGGAAGTGCAAGGGAAGTCTATAATGCAG
         TGTTCTGAGTGTGTGCAGAACCTATGGAGGAAATCAGAACTTGAGATAGAGAAACAAGTC
         CTGTTAATGGTAACGCCATTTGGATCTGGAAATAACTGTGTTTGCATAGTCCATGTCTGT

142600   GTGGCCCCAGTTGTAGGCTATGTAGCAGCATGGCTGTGGTGGTGGTGGTTGCTTGGTGTA
         TGTGTGGAAGTGCAAGGGAAGTCTATAATGCAGTGTTCTGAGTGTGTGCAGAACCTATGG
         AGGAAATCAGAACTTGAGATAGAGAAACAAGTCCTGTTAATGGTAACGCCATTTGGATCT
         GGAAATAACTGTGTTTGCATAGTCCATGTCTGTTCTCTTACAGATGAGGAAACAAAAGCT
         CTTCATTTAAGGAGAGAAATAGTCCACTCTCTTGTTTACTCTTTTACTTGACATTGATTG
         [A,T]
         ACCTCTCAATGGCAAAGACTGTGTTGTGCATTAGATAGATATGCTGAGAAATGAGAAAGA
         GGCTGTGCCCTCAAAAATTTGTCCTAAAAGGGGAACATCTAGATAATCAATGAGCTAATA
         AATGATTAGATACAGTGTTGTCCCTTCAACCATCTCTTTGGATTCACCACATTCTCCACA
         CTCTCTCTAAAGACTCCCACTCATGCCCCTGGTGAGTCAAAAGCTCCTGGCCAGTAGCCT
         CTTCTCTGATCAACTCATATATTTCTGCTCATATCACCTTTGCTGGTGGCATACCAGAAT

142631   GGCTGTGGTGGTGGTGGTTGCTTGGTGTATGTGTGGAAGTGCAAGGGAAGTCTATAATGC
         AGTGTTCTGAGTGTGTGCAGAACCTATGGAGGAAATCAGAACTTGAGATAGAGAAACAAG
         TCCTGTTAATGGTAACGCCATTTGGATCTGGAAATAACTGTGTTTGCATAGTCCATGTCT
         GTTCTCTTACAGATGAGGAAACAAAAGCTCTTCATTTAAGGAGAGAAATAGTCCACTCTC
         TTGTTTACTCTTTTACTTGACATTGATTGAACCTCTCAATGGCAAAGACTGTGTTGTGCA
         [T,C]
         TAGATAGATATGCTGAGAAATGAGAAAGAGGCTGTGCCCTCAAAAATTTGTCCTAAAAGG
         GGAACATCTAGATAATCAATGAGCTAATAAATGATTAGATACAGTGTTGTCCCTTCAACC
         ATCTCTTTGGATTCACCACATTCTCCACACTCTCTCTAAAGACTCCCACTCATGCCCCTG
         GTGAGTCAAAAGCTCCTGGCCAGTAGCCTCTTCTCTGATCAACTCATATATTTCTGCTCA
         TATCACCTTTGCTGGTGGCATACCAGAATCAAGAATCAATTCTGTTTGTTTTCAAACCTG

145397   GGCAGCATGTGCTCTTGGTTGTCATGCCTCCATTCCTCCTTCTGGAAAATAGTAAAGAAG
         AAAATGTATAAGTTAGAGAGGTGAAAGAGTGTTAGAGCTAATTAAATCTCACTTATTTTA
         CTTATGAGGAAATAACTCCCAAAGAGGAGAAATGACTAAGTTCATATAAAGAACCTGCAG
         CTAACTTGGTCATTTAGTCATATAAAGAACCTGCAGCTTACTTGGTCATTTATGCATTTA
         TTCCATTCAGCAGACATGTTTCAGTGCCTCCCATGTGCCAGGCACTGTGGTAGATGCTAG
         [G,A]
         ACAATAGTGATAAGTAAATAAACATGATTCTTGCCCTAATCAGGGAGATGAAATTAAACA
         AATAAACCAAAAGTTAAACAAAATAATTAAAGATAGAGATAAGGTATGATGGAAAGAAAC
         AAGGTACCGCAATAGAGAATAAAGAGTAGGGACCGGGCACGGTGGCTCACTCCTGTAATC
         CCAGCATTTTGGGAGGCCGAGGCGGGTGGATCACAAGGTCAGGACATCGAGACCATCCTG
         GCTAACACGGTGAAACCCCATCTCTACTAAAAATACAAAAAAATTAGCCAGTCGTGATG

145438   CTGGAAAATAGTAAAGAAGAAAATGTATAAGTTAGAGAGGTGAAAGAGTGTTAGAGCTAA
         TTAAATCTCACTTATTTTACTTATGAGGAAATAACTCCCAAAGAGGAGAAATGACTAAGT
         TCATATAAAGAACCTGCAGCTAACTTGGTCATTTAGTCATATAAAGAACCTGCAGCTTAC
         TTGGTCATTTATGCATTTATTCCATTCAGCAGACATGTTTCAGTGCCTCCCATGTGCCAG
         GCACTGTGGTAGATGCTAGGACAATAGTGATAAGTAAATAAACATGATTCTTGCCCTAAT
         [C,T]
         AGGGAGATGAAATTAAACAAATAAACCAAAAGTTAAACAAAATAATTAAAGATAGAGATA
         AGGTATGATGGAAAGAAACAAGGTACCGCAATAGAGAATAAAGAGTAGGGACCGGGCACG
```

FIGURE 3, page 103 of 122

```
                  GTGGCTCACTCCTGTAATCCCAGCATTTTGGGAGGCCGAGGCGGGTGGATCACAAGGTCA
                  GGACATCGAGACCATCCTGGCTAACACGGTGAAACCCCATCTCTACTAAAAATACAAAAA
                  AAATTAGCCAGTCGTGATGGCAGGCACCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAG

         145855   CACGGTGGCTCACTCCTGTAATCCCAGCATTTTGGGAGGCCGAGGCGGGTGGATCACAAG
                  GTCAGGAGACATCGAGACCATCCTGGCTAACACGGTGAAACCCCATCTCTACTAAAAATACA
                  AAAAAAATTAGCCAGTCGTGATGGCAGGCACCTGTAGTCCCAGCTACTCGGGAGGCTGAG
                  GCAGGAGAATGGCGTGAACCCGGGAGGTGGAGCTTGCAGTGAGCCGAGATCGCGCCACTG
                  CAATCCAGTCTGGGCAACAGAGTGAGACTCCATCTCAAAAAAAAAAAAGAAAAAAAAAA
                  [A,-,G]
                  AGTAGGATGAGTATTTTAGAGAAGGCCTCTATGAAGAGAGAACATTTTAAGCTGAGATCT
                  GAAGAATGCGAAGGGGTCAGCCACTTAAAGAGGGTTGGAAGAGCTTTCTAGGAGATAACA
                  GCTTGTGTAAAACCTCAAGGCAAGAAAGTCGGGACTGTCCTGAAAGGTAAGAGAAAGACC
                  AGCATGAAGCCCAGGCAGAGGTGTCATGGCCTGGAAGCAGATGTGGTGGGAGAGATAGGC
                  AGGGCCAGAACTCAGAGCCTCAGAGTTCAAAGTGCCCTTATTGGCAGACTCTTGATTGAT

         146816   GATGAATTTTGCTGATTTAGGGCACCCTCGGGCTGTCCTCTGTAGCTTTCAGTAAAGCTT
                  TGTCTTGATTGACAGATGCTGATCAAGTTCATGGGTATGCATTACAGTGTACGTTTGCTG
                  GTTGGCCTAGGAAAACCCATTTGCACGTATGACTTTCATAGGAAAAGAATGGCAAATAAG
                  AAACAAAAGATTTTTTTTCTGCCACTCACCCAAGGAACAGAAATTAAGCAGCCAAAGGA
                  AGAGTCTGCCTTCATTTAACGGATGATTTACCTGGTGTTCCTTGCGGTAGTGGTTCATTC
                  [G,A]
                  TGAACCAGCAGAAGGTATTTTGTGACTATGGGGATTGCGGAGATGACTGGGCCAGGAGGG
                  GAAGCTGTAAAGCTAATCTCTCCCACAACCCACTTCTCTTTGGCTAATGGCTTTGCTTTT
                  GTTTGTTCTGCTTTGGCTGGTTCATGTGCTAGTTCCCAAAGGCTGCACAAAGGCAGAGCT
                  AGGTAGATGTACTCCCTACCAGGGCTCTTTAGTGAATCCCACCTCCTAGCCCCAGATGAG
                  GCTGAGTGAACACTCACTCCAGCCTTGGACTGTAGCCTTTACTGTGGCCCCTGAACCTAA

         147228   TTTGCTTTTGTTTGTTCTGCTTTGGCTGGTTCATGTGCTAGTTCCCAAAGGCTGCACAAA
                  GGCAGAGCTAGGTAGATGTACTCCCTACCAGGGCTCTTTAGTGAATCCCACCTCCTAGCC
                  CCAGATGAGGCTGAGTGAACACTCACTCCAGCCTTGGACTGTAGCCTTTACTGTGGCCCC
                  TGAACCTAACCCAAGAATGAGACTTGTTGACCCAAGGCTCAGACCCCAAGTCTCAGATCC
                  CTTATTTCAAAGAGAGCTCCTCACCCCAGCTCCAGACTGAGCCCCTGGCCCAGCATTCCT
                  [G,C]
                  GCTGAGTCCCCACACGTGGTAGAGCCTTGGCCTCAAAGGGTCCATCCACAATGTTGTGAG
                  TCCCTTGGTACATATTCACTTTTTGAATGAACCTCTGAGGACCCCTGCCCTCTCAAGACT
                  GGCGTCTCCTCTGCCATCTCATCAGAGTGGCTTTTAGCCATGGAGCAGTGTCATAGCCTC
                  CTCTAGTCCAAAGCTGGCCGGTGCTAAGAAGAGGAAGCCTGGAACTCAGAACCTCTGTCC
                  TTGTGCCAACATGTTAGTTGCAGTCTATCTGTGAGCTTCACAGTCCCATTGACTCTTGTA

         147968   TGGGCTCAGACGTGTGTCCATCCTTGCATGACCCTTGGCTCCTCATCTGTTCATGGGTTT
                  AAAGGTCATCCTTCCTGCCCTGCCTACCTTATTGAGTATTCACAACAGAAAATGAATGTA
                  GGAGATTGAAAATTGTATAATGCACTCTAAGTTATTATTACCTCTCCCAAATTGTCAGCA
                  TTTCATCCTTGCTATCTAGCAGCAGAATAGTGTAGGGTAGGAGTTTACAAACTACAGCCC
                  ACAGGCCAAAGCCAGCCCAAGGCCAGATTTTCTAAATAAAGTTTTATTGAAACACAGCAA
                  [T,C]
                  GTAAATATGTAAACTCATTTGTTTACATATTGTCTTTGGCTGCCTTCATGCTATAAAAGT
                  AGCACTGAGTAGTGCAGCAGAGACCACATGGCCCGCAAAACCTAAGATATTTACTATTTG
                  GCTTTTTGCAGAAAAAGTTTGCCTATACCTGGCATAGAGGAGCAAAGTGAGGACTCTGAA
                  GTTGGAATGCCTGTGTTTGGATTCTGAATCTTCTACTTAATGGCTATATGACCTTGTGCA
                  AGTTAATTAGCTTCACTTTTCTCTCTATGAAATAAAAATAAACATTGTATCCCCACCCTG

         149372   AAATGCTCTCATTTTGAACCCATTCAACATCTTCAGGGTTGAGTTCTGTAATGGGATGTA
                  AATCTTCTTTCCTGGGGAGAAACGGCTGAGGAGACTGGGTGTTGTAGGTGGAATACATTA
                  AGGCTGGTGGGGTTTGAGTGCCAGCCCAAGAGCACAGCTCTCATTCTCAGTTGGCCTAAG
                  CTAACAGGGAGTGATCAAGTTCAGTGGACTGAAGCACAGGGGAGTATTACGTATCTTCCA
                  GACCTGTGGATGCTAGATGGGCAACCTAATTTAGAGGAATATGAAACAAGTAACAGCACC
                  [G,A]
                  TGCAATTTTCGTTATTCCCTACCTAGCTCTTTATGAGTTATTGTTCATTATATTAGCAGA
                  AAAATGAGGATTTGGAGAGCCTCTTCCTTCAAGGGGGCTTACATCTCAATTGCAGGTGAA
                  AAGGCATAAATACACAAAAAGTTACTTGATAATATAAAATAAAATAATCAATTCATTCAG
                  TGCAAGACATGTCATGAAAGAAAGATGGGTCAACTTAGTATCCAGAGATTAAAATAGGTA
                  AATGACTTGCATTCATTCATTTATTCTCATATTCATTCATGTCCAAAAATATTGTGTAGT

         .149466  CTGGGTGTTGTAGGTGGAATACATTAAGGCTGGTGGGGTTTGAGTGCCAGCCCAAGAGCA
                  CAGCTCTCATTCTCAGTTGGCCTAAGCTAACAGGGAGTGATCAAGTTCAGTGGACTGAAG
                  CACAGGGGAGTATTACGTATCTTCCAGACCTGTGGATGCTAGATGGGCAACCTAATTTAG
                  AGGAATATGAAACAAGTAACAGCACCGTGCAATTTTCGTTATTCCCTACCTAGCTCTTTA
                  TGAGTTATTGTTCATTATATTAGCAGAAAAATGAGGATTTGGAGAGCCTCTTCCTTCAAG
                  [G,T]
                  GGGCTTACATCTCAATTGCAGGTGAAAAGGCATAAATACACAAAAAGTTACTTGATAATA
```

```
              TAAAATAAAATAATCAATTCATTCAGTGCAAGACATGTCATGAAAGAAAGATGGGTCAAC
              TTAGTATCCAGAGATTAAAATAGGTAAATGACTTGCATTCATTCATTTATTCTCATATTC
              ATTCATGTCCAAAAATATTGTGTAGTCATTATGGGAACCCTTCAAAGGGATATGAATAAT
              AATATAAGCTTTATGAGGGCAAAGGCATCATCTGTCTTATTTACCACTCTATTCCACAGT

    149468    GGGTGTTGTAGGTGGAATACATTAAGGCTGGTGGGGTTTGAGTGCCAGCCCAAGAGCACA
              GCTCTCATTCTCAGTTGGCCTAAGCTAACAGGGAGTGATCAAGTTCAGTGGACTGAAGCA
              CAGGGGAGTATTACGTATCTTCCAGACCTGTGGATGCTAGATGGGCAACCTAATTTAGAG
              GAATATGAAACAAGTAACAGCACCGTGCAATTTTCGTTATTCCCTACCTAGCTCTTTATG
              AGTTATTGTTCATTATATTAGCAGAAAATGAGGATTTGGAGAGCCTCTTCCTTCAAGGG
              [G,A]
              GCTTACATCTCAATTGCAGGTGAAAAGGCATAAATACACAAAAAGTTACTTGATAATATA
              AAATAAAATAATCAATTCATTCAGTGCAAGACATGTCATGAAAGAAAGATGGGTCAACTT
              AGTATCCAGAGATTAAAATAGGTAAATGACTTGCATTCATTCATTTATTCTCATATTCAT
              TCATGTCCAAAAATATTGTGTAGTCATTATGGGAACCCTTCAAAGGGATATGAATAATAA
              TATAAGCTTTATGAGGGCAAAGGCATCATCTGTCTTATTTACCACTCTATTCCACAGTGT

    149474    TGTAGGTGGAATACATTAAGGCTGGTGGGGTTTGAGTGCCAGCCCAAGAGCACAGCTCTC
              ATTCTCAGTTGGCCTAAGCTAACAGGGAGTGATCAAGTTCAGTGGACTGAAGCACAGGGG
              AGTATTACGTATCTTCCAGACCTGTGGATGCTAGATGGGCAACCTAATTTAGAGGAATAT
              GAAACAAGTAACAGCACCGTGCAATTTTCGTTATTCCCTACCTAGCTCTTTATGAGTTAT
              TGTTCATTATATTAGCAGAAAATGAGGATTTGGAGAGCCTCTTCCTTCAAGGGGGCTTA
              [C,A]
              ATCTCAATTGCAGGTGAAAAGGCATAAATACACAAAAAGTTACTTGATAATATAAAATAA
              AATAATCAATTCATTCAGTGCAAGACATGTCATGAAAGAAAGATGGGTCAACTTAGTATC
              CAGAGATTAAAATAGGTAAATGACTTGCATTCATTCATTTATTCTCATATTCATTCATGT
              CCAAAAATATTGTGTAGTCATTATGGGAACCCTTCAAAGGGATATGAATAATAATATAAG
              CTTTATGAGGGCAAAGGCATCATCTGTCTTATTTACCACTCTATTCCACAGTGTCTAGCC

    151121    CTCAGTTTTACTCAGAGAGCTATGTGATCTCTTTCTCCTCACCTGCATCTCTACTGCTTT
              CCTCCTTTCCCCCTATACTGTGTCCACATGGGCCTTCTGTTTCTCAAGCTCTTCAGTCTT
              GTTCCTGAGCCTCATTCAGAGCCTCTGTTCCATTCCTTCTGCCTGAGACTGCTTCTTTAG
              CCTTTAGCCTGGCTGGCTCCTTCTTAGGGTTCATTTCTCAGCTCCAATGCTAGTGACACA
              GAGAGGTCTCCCTGACCATCCTGTCTAAAATAGTCCTGCCAGTCACTCTCACATCATCCC
              [G,A]
              TTTTATTTTCTTTGTAATATTCGCAGCATCCAAAATGGCCTTGTTTATTCACATGTCATC
              TCTCTCCCTCTCTAGAGCCTAAGCTCCAAGAGAGCAGAGACTTATCTTTTTATCCAGTGA
              TGTATACCCCTAGCACCAGCTTGCTGCCTAGCATACACTACACATTCAGGAAACTTGTTG
              GATGGGTGAATGATTAGGCAGAAGAAAGATGGAGAGAAGAAACAGAAAATTTCAATCTGT
              AGGACCTCACATCCCCAGTGAGTACAAAAGTTCTATTACAGGTACTTCACCAAAACAAAA

    151984    TAGCCTCGTATGCAGTACCACATCTCATTGGCTTTCAATGCCTAGTAATTAAGACCCATG
              CTTAATAATAAATACACAAATATGACCTGGGAGGATGGCTTTTCTTCCACATCTCCTTTT
              GCAGCCATCTTCCAACTGGGCATCAGGGCCTGGATGAAGAAAGTTCTTGTGAGTCTCAAA
              TGAATCCAAAACCAAAGTGAAATGCTACATTGACACATGACACAATGACCTAACTTCTCC
              AGCCCGGGCAAGGCCCTTGGCAACCTAGTCCCCACCCATCTCCAACTCTGTGCCATACCC
              [C,T]
              GACCCCAGTCTATACTGGTGTTTCTGGAGTTTTTCTGTTGTGCCCTTCTCTTTTATCTTGG
              TGCTTTGGATAAAGTGGTCCCTCTATCTAGACACAGGAACAAGGTGCTTAACACTGTGCC
              CGGCCTCTGCTAAAGGACCCAGTTAACACTGACTATAATAGCAGTTATGATCATTTATCC
              TGTGGCTGATCCCTTTATTACTCTCTCAAATCACCCTTTATTTTCCTTAATGTAAAACTC
              ACTGAACACTTGCTTAAGCTCTGTGAAGGTAGAAAACATGTCTGTCTTGTGTAATTGTGG

    152547    GTGAAGGTAGAAAACATGTCTGTCTTGTGTAATTGTGGTACCCCAATTTTCTGGCAATAT
              TAGTTTCTGGTGCCAATAAATATCTGTTGAATTTACTAAATAAATGATAACATTGTATCT
              AGTAAATGACAGACACCCTGGATGTGTCTCAGAATCCTAAGTAAATGTGATATTGTTTAA
              GGGCTTTGGGATGATTTATATCTATTATGGTAATTCTTTGCATGTCAGCATTATATCTAC
              GATACAAGAGAATATAAAAAGGGATGGACAGGCACTCTTATTGTCCTCTGAGTGATGGAA
              [A,C]
              TGAAGCACATCCCTTGATGTTACAACGTTAGAGTAAGATGATGAAGAATGTGATTCCCAC
              CAATAAGGATAGAATTATTCCAGGAGGGGAATGAGTGCCTGAAAGTCCCCCCATTCACAC
              ATACTTTTGATCTCCCTCCCCTAAAATGAAGCTGTCCTGTCACCTCATTATCTGCTATTT
              ACAATGAGGCTGCCACATTCCCAGGGACAGGAGCCAAGGAGAAATGTCGGTGTGAGAGGC
              CTTAAATGAAGTGACAATAAAAAAGGAGTTGTTAATGCCAGGAGTTCCCTCCCTGGGAGA

    152560    ACATGTCTGTCTTGTGTAATTGTGGTACCCCAATTTTCTGGCAATATTAGTTTCTGGTGC
              CAATAAATATCTGTTGAATTTACTAAATAAATGATAACATTGTATCTAGTAAATGACAGA
              CACCCTGGATGTGTCTCAGAATCCTAAGTAAATGTGATATTGTTTAAGGGCTTTGGGATG
              ATTTATATCTATTATGGTAATTCTTTGCATGTCAGCATTATATCTACGATACAAGAGAAT
              ATAAAAAGGGATGGACAGGCACTCTTATTGTCCTCTGAGTGATGGAAATGAAGCACATCC
              [C,T]
```

```
         TTGATGTTACAACGTTAGAGTAAGATGATGAAGAATGTGATTCCCACCAATAAGGATAGA
         ATTATTCCAGGAGGGGAATGAGTGCCTGAAAGTCCCCCCATTCACACATACTTTTGATCT
         CCCTCCCCTAAAATGAAGCTGTCCTGTCACCTCATTATCTGCTATTTACAATGAGGCTGC
         CACATTCCCAGGGACAGGAGCCAAGGAGAAATGTCGGTGTGAGAGGCCTTAAATGAAGTG
         ACAATAAAAAAGGAGTTGTTAATGCCAGGAGTTCCCTCCCTGGGAGACAGCTGTCAGGGC

154834   TTGCAAAGAGGTAAGAAAAGCAGGCTGCAGGCAGGAGGGGGACAGTGCAGGATCCCAGGA
         TTTTGTTACAAGGGAATCCAAGAACTCAGAGACTTACCTGCTTACTGGATTTGAAAAAGT
         GCACTGGGGGTTGCTAGAATTTGACTAAATAACTAAAATATTGTCGAATCAGTAAACATT
         TTCCAATCAATTAGACTAGACTCTAGAATGTCAGAGTCTGAAAGGGCATTAAGCATTATA
         GAGATCAAACAATCATTTCACAGATGGGAAAGCTGAGGCCTAGGAGAGCGTGGGATTTAC
         [T,C]
         TAAAGTCATACAAGTACTCTGTAATGATAAAACCAAAAAGAGAATCGTCCAGGTCTTCTG
         ACAGCTAGCCTAGTACTTTGTCTACAGAACCATGTTATCTCTTCTGATTGAATATTGGTT
         GTGACAGATTCAAAGTAGATATAATACCTCACAACTACTAATTATATTTATCAACATTTA
         ACCAATGACTGCCTTCTCCCACAGGCCTTGGGCCTATAGGGTCTGTCTGTCTGTTTCTGT
         CTCTCTCTCTTTCTTTTACTTCCTCTCTCTCTGCTGTTGCTTAGGTTTGGCTGAAGTGTA

155118   AGAGCGTGGGATTTACTTAAAGTCATACAAGTACTCTGTAATGATAAAACCAAAAAGAGA
         ATCGTCCAGGTCTTCTGACAGCTAGCCTAGTACTTTGTCTACAGAACCATGTTATCTCTT
         CTGATTGAATATTGGTTGTGACAGATTCAAAGTAGATATAATACCTCACAACTACTAATT
         ATATTTATCAACATTTAACCAATGACTGCCTTCTCCCACAGGCCTTGGGCCTATAGGGTC
         TGTCTGTCTGTTTCTGTCTCTCTCTCTTTCTTTTACTTCCTCTCTCTCTGCTGTTGCTTA
         [G,A]
         GTTTGGCTGAAGTGTAGAAATGGTCTGACAGTCAGGCACTGAGCAACTCTGGGAGCCAGG
         GTTCACTCAAGTAAATCCAGGCCAGGCTACCTCCAAGCCATGCTCTTTTAGGGAGTAGTG
         CGTAAATGCACCCTCTTAGCCTTAGAGGAGAAAGCACTCTGTTTAAGGTAAGAGATGTTT
         GCAGAAGGGGAAAATGAGGAGATAATTTGAAGGGGAAAATGTCCTGCCTCCTGTGTGTC
         TAAGGATTTGTTGTGTCTGCCTGCTCCCATTTCGTCCACCCCCATCTCACCCTTTCCTAC

156897   GGCTTCTGGGTAGAGAAGTGATTTTGTCACTGAAAACCAAATGTCCTAAAGCTCAAGGCC
         ATGAACACCACCTTCAGATACCAGGAGGGCTATAGAGTGGGTCAAGAGCAAGAATTGTGT
         GAAACCAGAATCTCAGTAACTAGAAGTATGCAAGCAGATGTTAATGATCACCTGCCAGGT
         TTCCTGCAGATGGTATGCTGGTTTTCAGTGGGAGTAGGACAGATGGGTTATATGGTTCAG
         CTGCAATCTTTAAGAGATTATGACCTTTAAAGCCCATTTTCTCTAGGGACTAACAGAAAA
         [C,T]
         GGAGACTCACAGTAGACAATTAGGTACCACTGGTTAATTGCATTCTTTATTGCAGCATGG
         GCCAAAAGATTTTCAATAACATTTCAAAAGTATTCACCAAAAAAAGGTCTTGGAGGCAAA
         TAGATTTGACAAAATCTGGGATAAAAATGGGTAGAATTCCTCACAATCTTTTATGCAGCT
         AATGTGAAGTATGAAACTCTAAAACAGGGACAAAGTATGCACCATTTCCCAAATGTATTT
         GACCAAAGAAGACTTATTTTTTAAGGAGCATCTTGTGGGGCTATAGTTTCATGAAACCTT

157808   GCAAAGATTATGAACTCTCATCCTATATCATATAGTAAAACAAAGTTTAGGAGCTGACTG
         ACTTGGAGTTTAATCCCATGACCTTGGTCTTATTAGCATCGTATTTTAATTAGAAGTATA
         ATCAACCACAAACCAGGATTGGCAACTGCATTGGGATTCTACAGAATCGGTCCTGTGGGT
         ATGTTCTCACAGCTAAGCTATTACTATGGCTGATACACTGGGGGGTCTGAAAATCAGCTA
         GCAAGATGTACAAGCACAAAGTGAACATTAGCAGACAAATGAACACTGAGAGTTAAGGGC
         [-,G,T]
         AGACTGGGAAAATCGACACTTGTTTTCTTAAACGTGTATTAGCAGCAATAGCTGGATTCT
         TCCTGTAGCACCTTTTTATGCTTTGCCTTTAATTGATAGACAATGTGAGGGGAAGATCGT
         TAGATTAAGAGTCAAGAATATCTGCCCAAGTCATATGTCCTAGCTGTGCTACCTTGAATA
         TGTTCATTAAATTTCTGAGCCTTGGTTTCTCCCCTTTAAAAAAATGACCCAGTCATCCCT
         TTCTAGCCTCAATAGGGTCATTGTAGAGACCAAGTAAGGTAATAGATGAAAGTGTCTTAT

159171   TCTTAATGCACCATGTCACTCTACAGCTCACTAAGCTTTCATGGCTCCTGAGTCCAAACT
         CAATGCAAAAGGACCTCAGACTTTGGAGTCAGGCAGATCTGGATCTGAAACCTAGGTTCT
         GTCCTCTCCAGCTGTTTGACTTTGGACAAACTCTCTCTGCCTCAATTTCAGCACTTATAT
         AATGGGGATAAAATTCTCTATGCCTTCATTTTCTCATGTCTATAATGAGGATAAAAACAA
         TGTCTATCTTATAAAGGTTTTGTGAAACTGAATGAGATGACTATGAAGTGTTCAGTGCCT
         [A,G]
         CAACATAGTAAAAACTCAAAATTCTTTCTCTGTTTTAGATGTTATCATCATCATCATCCT
         CCTCATCATAATCTTCATCCTTCTCTGGGCTTTCTAATTCTTCCTCCTTTGAATTTAACA
         TCACATTTTCCAAATGTTTTCTATACTTTTTCTTCTCTATGTCTTTACTCATGTTATTCC
         AGTTTTCTGGAATGCACTTCCCTTCTCCAATTTACATCTGTAAATCCTTCTCCTCTTTTG
         CAGGATGTCCCTATTCCCCAATTCGTGGATGGGAGCACTCTCTCCAACTCCCATGATGT

159465   GTGCCTGCAACATAGTAAAAACTCAAAATTCTTTCTCTGTTTTAGATGTTATCATCATCA
         TCATCCTCCTCATCATAATCTTCATCCTTCTCTGGGCTTTCTAATTCTTCCTCCTTTGAA
         TTTAACATCACATTTTCCAAATGTTTTCTATACTTTTTCTTCTCTATGTCTTTACTCATG
         TTATTCCAGTTTTCTGGAATGCACTTCCCTTCTCCAATTTACATCTGTAAATCCTTCTCC
         TCTTTTGCAGGATGTCCCTATTCCCCAATTCGTGGATGGGAGCACTCTCTCCAACTCCC
```

FIGURE 3, page 106 of 122

```
              [G,A]
              TGATGTTTGTCTTGTACTGTCCTACCTTCTCATTGTATACTAAATAGTCTTGTAATAATT
              TATTCACTACTGGTGTAAACAAATAAATGGGTCACGCAAGACCTGAAAGGTGAGACAGAG
              GAGTACAGTACTGATGTGGTTGCCTGCAGGGAGTCTTAGAAAACTTTTGAGTTGGAGAGA
              GGTTTGTGAAAGTGATTTTTCAGGCAGTTAGGCAGGCGTCGTTCAGATGGGAAGGAGCCA
              ACAGAAGAAACCAGGAACACCCTATTTTCTTTGATTTTCTCTTCACTGTCCCCACTTTGA

    159505    TTTAGATGTTATCATCATCATCATCCTCCTCATCATAATCTTCATCCTTCTCTGGGCTTT
              CTAATTCTTCCTCCTTTGAATTTAACATCACATTTTCCAAATGTTTTCTATACTTTTTCT
              TCTCTATGTCTTTACTCATGTTATTCCAGTTTTCTGGAATGCACTTCCCTTCTCCAATTT
              ACATCTGTAAATCCTTCTCCTCTTTTGCAGGATGTCCCTATTCCCCAATTCTGTGGATGG
              GAGCACTCTCTCCAACTCCCATGATGTTTGTCTTGTACTGTCCTACCTTCTCATTGTATA
              [C,T]
              TAAATAGTCTTGTAATAATTTATTCACTACTGGTGTAAACAAATAAATGGGTCACGCAAG
              ACCTGAAAGGTGAGACAGAGGAGTACAGTACTGATGTGGTTGCCTGCAGGGAGTCTTAGA
              AAACTTTTGAGTTGGAGAGAGGTTTGTGAAAGTGATTTTTCAGGCAGTTAGGCAGGCGTC
              GTTCAGATGGGAAGGAGCCAACAGAAGAAACCAGGAACACCCTATTTTCTTTGATTTTCT
              CTTCACTGTCCCCACTTTGATGACTTCCCTTCTCAGACTGCGACTATTGCAGGGGTCACC

    159786    CCTACCTTCTCATTGTATACTAAATAGTCTTGTAATAATTTATTCACTACTGGTGTAAAC
              AAATAAATGGGTCACGCAAGACCTGAAAGGTGAGACAGAGGAGTACAGTACTGATGTGGT
              TGCCTGCAGGGAGTCTTAGAAAACTTTTGAGTTGGAGAGAGGTTTGTGAAAGTGATTTTT
              CAGGCAGTTAGGCAGGCGTCGTTCAGATGGGAAGGAGCCAACAGAAGAAACCAGGAACAC
              CCTATTTTCTTTGATTTTCTCTTCACTGTCCCCACTTTGATGACTTCCCTTCTCAGACTG
              [C,T]
              GACTATTGCAGGGGTCACCTGGAAGTCTATTTCAGGACAGCTTTGCAGCATAATGTAGCT
              GGAGGCCTGGAAGTAATAAAGCCAGAAAAATGTACCTTTGCTTGTGGGAGATCATCTCTG
              GGGTCAGCAGAAGCACCCACACTCTCAAAAGAGCTCCACCTACCTCAGAACTCAGAGCTC
              AGAGCCCTGCCGTTTGTCAGCTGTGTGACCTTGGACTAATGACTAAATCTCTCTAAGCCT
              CAATTTCCACACTATAAAATAGGGATAATAATAGTATCTACCTTGAAAGATTAAGTGGAT

    159787    CTACCTTCTCATTGTATACTAAATAGTCTTGTAATAATTTATTCACTACTGGTGTAAACA
              AATAAATGGGTCACGCAAGACCTGAAAGGTGAGACAGAGGAGTACAGTACTGATGTGGTT
              GCCTGCAGGGAGTCTTAGAAAACTTTTGAGTTGGAGAGAGGTTTGTGAAAGTGATTTTTC
              AGGCAGTTAGGCAGGCGTCGTTCAGATGGGAAGGAGCCAACAGAAGAAACCAGGAACACC
              CTATTTTCTTTGATTTTCTCTTCACTGTCCCCACTTTGATGACTTCCCTTCTCAGACTGC
              [G,A]
              ACTATTGCAGGGGTCACCTGGAAGTCTATTTCAGGACAGCTTTGCAGCATAATGTAGCTG
              GAGGCCTGGAAGTAATAAAGCCAGAAAAATGTACCTTTGCTTGTGGGAGATCATCTCTGG
              GGTCAGCAGAAGCACCCACACTCTCAAAAGAGCTCCACCTACCTCAGAACTCAGAGCTCA
              GAGCCCTGCCGTTTGTCAGCTGTGTGACCTTGGACTAATGACTAAATCTCTCTAAGCCTC
              AATTTCCACACTATAAAATAGGGATAATAATAGTATCTACCTTGAAAGATTAAGTGGATT

    160954    AGGCAAGAGAGTGGATTCTTCCCTAGAACCTTTAGACACCAACACAGCCCTGCTGACACC
              TTGATTTTAGCCTGGGACACCTATCTCATGCATCTTACCTCAAGAACTGTAAGATAGTAC
              ATTTGTGTTGTTTTAAGCCAGTAAGTGTGTGATAACTTGTTACAGCAGCAGTAGGAAACT
              AATACACCATCTAATTCTCCAAGAAGAAACAAAGCAGCATTGAGTAATGGCCTCTCTACT
              CATTTAGCTATAGATCAGAAGAGAGTAGTTTAATTCAGGACACATTTTATTTATTTATTT
              [-,T,A]
              TTTATTTAGTTAGTTAGTTAGTTGAGACAGAGTTTCACTCTTGTCACCCAGGCTGGAGTG
              CAATGGCACGATGTGGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCAATTCTCCTGC
              CTCAGCCTACCAGGTAGCTGGGATTACAGGTACCTGCCACCATGCCTGGCTAATTTTTGT
              AATTTTTTTTAGTAGAGATGGGGTTTCATCATGTTTGCCAGGCTGGTCTCAAACTCCTGA
              CCTCAGGTGATCCACCCACCTCGACCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACT

    160955    GGCAAGAGAGTGGATTCTTCCCTAGAACCTTTAGACACCAACACAGCCCTGCTGACACCT
              TGATTTTAGCCTGGGACACCTATCTCATGCATCTTACCTCAAGAACTGTAAGATAGTACA
              TTTGTGTTGTTTTAAGCCAGTAAGTGTGTGATAACTTGTTACAGCAGCAGTAGGAAACTA
              ATACACCATCTAATTCTCCAAGAAGAAACAAAGCAGCATTGAGTAATGGCCTCTCTACTC
              ATTTAGCTATAGATCAGAAGAGAGTAGTTTAATTCAGGACACATTTTATTTATTTATTTA
              [-,A,T]
              TTATTTAGTTAGTTAGTTAGTTGAGACAGAGTTTCACTCTTGTCACCCAGGCTGGAGTGC
              AATGGCACGATGTGGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCAATTCTCCTGCC
              TCAGCCTACCAGGTAGCTGGGATTACAGGTACCTGCCACCATGCCTGGCTAATTTTTGTA
              ATTTTTTTTAGTAGAGATGGGGTTTCATCATGTTTGCCAGGCTGGTCTCAAACTCCTGAC
              CTCAGGTGATCCACCCACCTCGACCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTG

    160959    AGAGAGTGGATTCTTCCCTAGAACCTTTAGACACCAACACAGCCCTGCTGACACCTTGAT
              TTTAGCCTGGGACACCTATCTCATGCATCTTACCTCAAGAACTGTAAGATAGTACATTTG
              TGTTGTTTTAAGCCAGTAAGTGTGTGATAACTTGTTACAGCAGCAGTAGGAAACTAATAC
              ACCATCTAATTCTCCAAGAAGAAACAAAGCAGCATTGAGTAATGGCCTCTCTACTCATTT
```

```
       AGCTATAGATCAGAAGAGAGTAGTTTAATTCAGGACACATTTTATTTATTTATTTATTTA
       [G,T]
       TTAGTTAGTTAGTTAGTTGAGACAGAGTTTCACTCTTGTCACCCAGGCTGGAGTGCAATG
       GCACGATGTGGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCAATTCTCCTGCCTCAG
       CCTACCAGGTAGCTGGGATTACAGGTACCTGCCACCATGCCTGGCTAATTTTTGTAATTT
       TTTTTAGTAGAGATGGGGTTTCATCATGTTTGCCAGGCTGGTCTCAAACTCCTGACCTCA
       GGTGATCCACCCACCTCGACCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGGGCC

161415 CATGCCTGGCTAATTTTTGTAATTTTTTTTAGTAGAGATGGGGTTTCATCATGTTTGCCA
       GGCTGGTCTCAAACTCCTGACCTCAGGTGATCCACCCACCTCGACCTCCCAAAGTGCTGG
       GATTACAGGCGTGAGCCACTGGGCCTGGCCTGCCAGGACACATATTAAACACCTACTGTG
       TGAGAGACAAAGTATTAGGTATTAAAGATACTATATTGAACATTCACAAATTTGATCAGC
       AGTTATTAGGTGACCATTTAGATGCTAGGTTGGCACATTTAATAAGCAGTTACTGAGTGC
       [C,T]
       GAATAAAACTAACAGCTAATATTTATAAAACCCTTGCAGGTGTCAGGCTCTGCTATGTAT
       CAAACATTCTCACTTAATCCTCATAATGACATTATGAGGTGAGCATTATTTACACCACAC
       TTTACCTTTGAAGAAACTAAAGTTTGAAGAGGCTAATGAGCCTGCACAAGGCCATTTAGC
       CATATGTTGGATTTGAGCCTCAGATTGTTTTTTAATCACTAGTTCTACCATCTATGTTCA
       GAAACACAGTGTCTGATCTCACAGAGTTCAGAGTTTTGCAGCCAGAGAAAACTAGAACTG

161800 AATGACATTATGAGGTGAGCATTATTTACACCACACTTTACCTTTGAAGAAACTAAAGTT
       TGAAGAGGCTAATGAGCCTGCACAAGGCCATTTAGCCATATGTTGGATTTGAGCCTCAGA
       TTGTTTTTTAATCACTAGTTCTACCATCTATGTTCAGAAACACAGTGTCTGATCTCACAG
       AGTTCAGAGTTTTGCAGCCAGAGAAAACTAGAACTGAGTTTGGCAGAAGAGTGGGTTTGG
       GGGTAGCCAGGGGAGGTAGGTGCCTGATGGGAGTGGGTGGTGCCCACAAATCCTGACTGT
       [-,T,C]
       ATTTCTCTTCTACTCATCTGAACTTTAGGCTTATCCGTCCTGCAGAAAGTCCTGGATACA
       GCTGCTGAGAAGAACTGGCAGGTGACAGCAGTCAACATCTTGACAACCACAGAGGAGGGA
       TACCGGATGCTCTTTCAGGACCTGGAGAAGAAAAAGGAGCGGCTGGTGGTGGTGGACTGT
       GAATCAGAACGCCTCAATGCTATCTTGGGCCAGGTAGTGAAAGCAGCAAGGGCTCAGGGT
       GGGTGCGGGAGGTGATTCAGGAATAGCCAGACACACTTTTGCCTTGGGTGTTATAAAGAG

161899 ATGTTGGATTTGAGCCTCAGATTGTTTTTTAATCACTAGTTCTACCATCTATGTTCAGAA
       ACACAGTGTCTGATCTCACAGAGTTCAGAGTTTTGCAGCCAGAGAAAACTAGAACTGAGT
       TTGGCAGAAGAGTGGGTTTGGGGGTAGCCAGGGGAGGTAGGTGCCTGATGGGAGTGGGTG
       GTGCCCACAAATCCTGACTGTCATTTCTCTTCTACTCATCTGAACTTTAGGCTTATCCGT
       CCTGCAGAAAGTCCTGGATACAGCTGCTGAGAAGAACTGGCAGGTGACAGCAGTCAACAT
       [T,C]
       TTGACAACCACAGAGGAGGGATACCGGATGCTCTTTCAGGACCTGGAGAAGAAAAAGGAG
       CGGCTGGTGGTGGTGGACTGTGAATCAGAACGCCTCAATGCTATCTTGGGCCAGGTAGTG
       AAAGCAGCAAGGGCTCAGGGTGGGTGCGGGAGGTGATTCAGGAATAGCCAGACACACTTT
       TGCCTTGGGTGTTATAAAGAGGGTTATAAAGAGGGTTCTTGACTAGGTGAGACTAAAAGA
       CCTCTATCTCATTTTCTATAATTCACAAAATTTAATTCTGAAATAGCACAAACAATGGGA

162793 CCTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCCAAGATTGTGCTACTGCACTCCAGCCT
       AGGCAACAGAGCAAGACTCCATCTCGAAAAATAATAAAAAATAATAATGATAAATTACAT
       TCCATTTTAGAGTTTATGAAATGTTATCATATTAGGAACACAGCTTATAGGGCCAAATTT
       CTGGGTTCGACTCTGGACTCTGTCACTCATGATCCAGGGTTTGGCATCTCATTCCTTTCA
       CCTTCTTAACTGTTTTGAAAGGCTAAGGAAGCAGCAGCCACCTTTATTTCCATTGTTTCC
       [T,C]
       TGAACATGCCCTTCCCTTTGAGAAATCAATTGACAGTACATTCTTCTATAAACAGGCATT
       GTAACTTCAACAGTCTTGAGCTAGATCTCTCTAAACTGTGCTTCCCCTGGTCTCAAAACA
       AAAGCCCATGCCCACCACAGAATTAGGATTTTTTGTAGATTCCTTATCTTTTTAAACTAC
       ATTTATGTATTCAGATTCAGAGCTAGCAAGGTAGCAGACGTTGCAATAACTTTTGAACAA
       TGTCATACAATAAAATTGATAGTTTTAGGTACTTGACAACATGACAAAGTTTGTTAATGG

162919 TTAGAGTTTATGAAATGTTATCATATTAGGAACACAGCTTATAGGGCCAAATTTCTGGGT
       TCGACTCTGGACTCTGTCACTCATGATCCAGGGTTTGGCATCTCATTCCTTTCACCTTCT
       TAACTGTTTTGAAAGGCTAAGGAAGCAGCAGCCACCTTTATTTCCATTGTTTCCCTGAAC
       ATGCCCTTCCCTTTGAGAAATCAATTGACAGTACATTCTTCTATAAACAGGCATTGTAAC
       TTCAACAGTCTTGAGCTAGATCTCTCTAAACTGTGCTTCCCCTGGTCTCAAAACAAAAGC
       [C,A]
       CATGCCCACCACAGAATTAGGATTTTTTGTAGATTCCTTATCTTTTTAAACTACATTTAT
       GTATTCAGATTCAGAGCTAGCAAGGTAGCAGACGTTGCAATAACTTTTGAACAATGTCAT
       ACAATAAAATTGATAGTTTTAGGTACTTGACAACATGACAAAGTTTGTTAATGGCCTTCA
       AGACCCCTGGGGCCCTCACAGAGAATCTTGGTACTAGGACAGCTATTACTCAGAGGCCTC
       AGCAATAGAACACAGACAGAGTTTGAATGTTATGGATTCTTTAAGGCACTAACTGTTCTA

162939 TCATATTAGGAACACAGCTTATAGGGCCAAATTTCTGGGTTCGACTCTGGACTCTGTCAC
       TCATGATCCAGGGTTTGGCATCTCATTCCTTTCACCTTCTTAACTGTTTTGAAAGGCTAA
       GGAAGCAGCAGCCACCTTTATTTCCATTGTTTCCCTGAACATGCCCTTCCCTTTGAGAAA
```

```
         TCAATTGACAGTACATTCTTCTATAAACAGGCATTGTAACTTCAACAGTCTTGAGCTAGA
         TCTCTCTAAACTGTGCTTCCCCTGGTCTCAAAACAAAAGCCCATGCCCACCACAGAATTA
         [-,A,G]
         GATTTTTTGTAGATTCCTTATCTTTTTAAACTACATTTATGTATTCAGATTCAGAGCTAG
         CAAGGTAGCAGACGTTGCAATAACTTTTGAACAATGTCATACAATAAAATTGATAGTTTT
         AGGTACTTGACAACATGACAAAGTTTGTTAATGGCCTTCAAGACCCCTGGGGCCCTCACA
         GAGAATCTTGGTACTAGGACAGCTATTACTCAGAGGCCTCAGCAATAGAACACAGACAGA
         GTTTGAATGTTATGGATTCTTTAAGGCACTAACTGTTCTACTTTATGAAGTACAAATTTG

163647   AAGATAATAGTTAAGAGCAGAGATAAAACCAGACTGGCTAGGGTTCAAATCCCAGCTCTA
         GTATTTACTGGCTTTGTGACCTTGACCAGGTTTTTAATCTTTCTACATCTCAAGTTCTTG
         ATCTGTAAAATGGGCATCATCATCATAATAATAGCCACTTTTAGAGGGCTCTTGTGAGAA
         TTAAAAGAATCAATATATGTGAAGCACTTAGAACAGAGTCTGCCCCACAGTAAGTGGTAC
         AAGCAAGCATTTGCCTATTTTTGCTATTCCTAGTGCCTACTAGGACCAGCTTCTTGAGTC
         [A,C]
         CTTTCTTCCTTGGGCATAAGTGAATCCGTCTGTAAAATGTGAATGAAGGCCTCTGTTCTA
         TAAAACTGATAAAAAGGCAAGATAACATAGTCGATGGAAAAAGTGCCAAATGATAATGAC
         ATATTAATAGACAGATGACCTATTGTATATTGTTCTATGGTACAGACAGTAGCTATTACT
         ACTATTTTTTTAGTGTGTATGGTATACCAGATACTATGCCAAGACCTTCCCATGCATAAT
         CCTACTTCATTCCCACATCAACTTTGTAAAACAGCTTTTTTCAATTCCCCTATTTTATAG

163675   CCAGACTGGCTAGGGTTCAAATCCCAGCTCTAGTATTTACTGGCTTTGTGACCTTGACCA
         GGTTTTTAATCTTTCTACATCTCAAGTTCTTGATCTGTAAAATGGGCATCATCATCATAA
         TAATAGCCACTTTTAGAGGGCTCTTGTGAGAATTAAAAGAATCAATATATGTGAAGCACT
         TAGAACAGAGTCTGCCCCACAGTAAGTGGTACAAGCAAGCATTTGCCTATTTTTGCTATT
         CCTAGTGCCTACTAGGACCAGCTTCTTGAGTCACTTTCTTCCTTGGGCATAAGTGAATCC
         [G,A]
         TCTGTAAAATGTGAATGAAGGCCTCTGTTCTATAAAACTGATAAAAAGGCAAGATAACAT
         AGTCGATGGAAAAAGTGCCAAATGATAATGACATATTAATAGACAGATGACCTATTGTAT
         ATTGTTCTATGGTACAGACAGTAGCTATTACTACTATTTTTTTAGTGTGTATGGTATACC
         AGATACTATGCCAAGACCTTCCCATGCATAATCCTACTTCATTCCCACATCAACTTTGTA
         AAACAGCTTTTTTCAATTCCCCTATTTTATAGATGAAGAAAGAGAGATTATACTTGCCC

165562   CCCCAGCACATAGCATAGTGCTTGGCATATAATTTATGTTAAATAAATGTTTGTTGAATG
         GATTAATTAGTTAATCATAGAGGGTTTTACAGAGGAGTTGAGATTGGAGCTCAGCCATTA
         AGGATACGAACAATCAGAGAGAATGGGAGAGGCCATTCAGCACACAAATATTGTGAATGAA
         GGCAATGCATTGGGAATGAGCTTTGAAGTAATGGGGGTCAGTGAGGTGATGGACCCCTTG
         TGAAATTGCTTCTTACATTTATAACACCTTTCTCAGTTTGTTACCCTGTATATATTTATC
         [C,T]
         GTTCACCTATTTATTATGGATCTCCTCTCAATGAAGTGTAACCTCCAAGAGGGCAAGCAC
         CATGCTTCTTTCACCTTTCCACTGTGTTGCCAATAGTGCTTCACCCATAGCAAGCTCTTA
         ATACATATTTGTGAAAGGAAGGTATTAGAGGAGGGAAGGTCAATGTATAGGTTGGGGAAT
         AGATAGATGGGAAGGTTGGTATCAGGTTGGATCATATGAAATTGCCAGTTTTTATAAGTC
         AAAAGTCATCAGTTATCAGCTGTTTCCTTTGTTTCAATTTGTACTTTCATCTTGTGGGGA

166011   AGGAGGGAAGGTCAATGTATAGGTTGGGGAATAGATAGATGGGAAGGTTGGTATCAGGTT
         GGATCATATGAAATTGCCAGTTTTTATAAGTCAAAAGTCATCAGTTATCAGCTGTTTCCT
         TTGTTTCAATTTGTACTTTCATCTTGTGGGGACAATATTTCTCCATTGCCTGAATGTGGT
         TGGTTTTAAAATATCATGTCTTTGCTGTTTTGTGTTTATTAGAAGCTGAATAGGTTCTTG
         ATAAAGGTGTCTCATTGTTGAAAAGGCAGCAAACCATTTGACAAGCAGATGAAAAAGTAA
         [T,C]
         GAAGAATTATTAATAAAACTATCATCCCAATAGTATTTGAGCTCCGTGGTCTGGAATTTC
         ACAATCTAACCACTATTTCAAAGAATTCATTGTGTGTGCTTGCATTTAATTATTCCCCAC
         ATAAAAAAACATGAGTCACTATGCACATACATCCAATTAAGTAGATGTCTGAATGTGGAT
         TTTAATAACCTTGAAAATTTATTCAGTTAGAGAAGAAGCCCAAGTGCTTATCATCTGTTA
         TATGTCTCCTTGCAACAGTGCAGGGAGAGAGACACCGAGCAGAGTACACTAACCCCAATT

166623   AAAAATAGGGAATTAGATCTAGTTAATCTGCAGGCTGAGCTAGATCTAAAACCAAGGTCT
         GTAGTCTTAACCATTCATTATTAGGTGTGTCTCCTGCCCAAGCAAACTTCTGGGCAGTTC
         TTTCCACAAATATTTTTTCTACCTGTGATGATTAGGGATAGTCTGCATTTTGGGATAAAA
         GGGTATTCATTGACACTGGTTCTTAATGATTAACCATAATCAAACATCAAATGGAAAGT
         TCACAGGAGTCAGGTCCCTGTCCTGATACTGCCACCAGGCTACTATCAGATCTGGGCAAA
         [G,A]
         CATTTTCCCTCTGTGGGTCTTGACTTCCTATCTGTACAGTGAGAGTTTGGACCAGATGAT
         CCTAACTTTCCCTTCCAGCTTCTAAGTTGGGCAATCCATTAATGTCTGAGTACCTAACTG
         ATTCGGGGAGGAAGGCACAAAATTCAGAAAAAGAAAGAAGAGCATCTATATATGGTTCAT
         GCAAGGAATTGAAGGTGAAGTCATCCACATACCCATCTGACCATTCATCCACCATCCATC
         TATTAACTCATCTGTTTTTCCAATCAGCGAATATTGTCATGACAGATTTCATGCAACATA

167461   ATGCCACCATCATTGGATGGTTGGGATATTGTAGTTCTAGTACTTAGGGTAGGGCACATT
         GTAAGCACTCGATATCAGCTGCCGTTATTACTGTTGTTGTCGTGGCTTTAACTGTTAGTA
```

```
        TGATTAATGAGTCTCCACCTATTATGTTTTGTAGATTATAAAGCTAGAGAAGAATGGCAT
        CGGCTACCACTACATTCTTGCAAATCTGGTGAGTAGAGCACTGCAGGCTCTCAGCTCAAG
        TCCTTTCCAGGTTTGGGGCCCTACCTTGCTTCTGTTGTCCCTGGCTGATGTGAACTGAGT
        [G,A]
        GGTGGAAGGGGCAATTCAGGGCTGTAATAATGAGTCTTGGCAATACTACATTTTTATCTT
        CTCCACATCCCACTCATCAAACCACAACACACTATTCATGAACCTCTAACCTTCCTTGGA
        AGAGAGCATACTGGTGGGCACGGCTTTATCATCTTCACAATTCCAGCTTTAATTGGCTCT
        GCCCCTTGGCAATAGGGACAAAATCACCCACATCTTTGAATTAATGCAAGATGTCTTGATC
        TTACTGGTTTGGGTCCTCCATTTTGACCCCAGTGATAGTTTTACTTCTTATAAATACATT

168935  GAATAATGCTGCTATAAAATATTAGTGTACAAGATTTTCACTTTAATATATACCTAGGCA
        TGGAATTACTGGGTTATATGATAACTCTATGTTTAACATTTTGAGGAACTCCAAAATTAT
        TTTCCAAAGTGGCTGCATCACCCATCAAATTTTAATCAATAACAAATTTTTCCATGTGAC
        AGTTTGAATGATGGCAAGTGTCTCTTAATGATAACTATTTCTACAGTTTATTATCCTGTT
        CTGTCTTTGCAATTTTCCATGTTTCCATTAAGAAGTGGTTTCTAGCTTTTTATCTATAAC
        [G,A]
        AATTTTCAGGTTTTAACTTACTTAACTGAACATATAACTGGCTTCAGTTTTAACCATGTT
        ATTTTGTGTTGATTATCTCTATGAGCAATAGTAATTGAACAAAGGATTAATATTTGTTAC
        TCATTTCTGGAGTAAAGTCTGTTAGTAGAAATAAGGCACAGGGTGCATGAATCTAAAAAT
        GTGACCAAAGCATCCTGCCTAATCCATAAATTCTGTCCTTCTTTCTGACCTGGTATCCAG
        CCTTAGATAGATCCCTGCCTTACTCTTCTTTCCCCTTCTTCAACTAACTTGTCTTGGCAA

169142  ATGATAACTATTTCTACAGTTTATTATCCTGTTCTGTCTTTGCAATTTTCCATGTTTCCA
        TTAAGAAGTGGTTTCTAGCTTTTTATCTATAACGAATTTTCAGGTTTTAACTTACTTAAC
        TGAACATATAACTGGCTTCAGTTTTAACCATGTTATTTTGTGTTGATTATCTCTATGAGC
        AATAGTAATTGAACAAAGGATTAATATTTGTTACTCATTTCTGGAGTAAAGTCTGTTAGT
        AGAAATAAGGCACAGGGTGCATGAATCTAAAAATGTGACCAAAGCATCCTGCCTAATCCA
        [T,G]
        AAATTCTGTCCTTCTTTCTGACCTGGTATCCAGCCTTAGATAGATCCCTGCCTTACTCTT
        CTTTCCCCTTCTTCAACTAACTTGTCTTGGCAATATTTCGGAGTGAGGACTTGAAATAAG
        AAGGGCTTAGAGAAGTAGGTTAATTTAGGCCCAGCTGTTAATGGCTAAATATATTACCTT
        TCTCAGAGGTATTTGCATTTTAAATGAGGGTGGCTCTCCAGACACTTTTGGGGAACGAAG
        AGTCTCACCCTCCAAAGACCATTTGCAAAAATGGAATTTTTGACTTCGGAGTGAGGAAAG

169379  AGTAGAAATAAGGCACAGGGTGCATGAATCTAAAAATGTGACCAAAGCATCCTGCCTAAT
        CCATAAATTCTGTCCTTCTTTCTGACCTGGTATCCAGCCTTAGATAGATCCCTGCCTTAC
        TCTTCTTTCCCCTTCTTCAACTAACTTGTCTTGGCAATATTTCGGAGTGAGGACTTGAAA
        TAAGAAGGGCTTAGAGAAGTAGGTTAATTTAGGCCCAGCTGTTAATGGCTAAATATATTA
        CCTTTCTCAGAGGTATTTGCATTTTAAATGAGGGTGGCTCTCCAGACACTTTTGGGGAAC
        [G,C]
        AAGAGTCTCACCCTCCAAAGACCATTTGCAAAAATGGAATTTTTGACTTCGGAGTGAGGA
        AAGCCCTTAACATCCCTTGACTCCCAGATCCTTAGTGCTAGAGCGGACTTAGGAAGTCAA
        CTCCACTTAAACCTCACTTGTTTATAGGGAAACAACCAGCAAAGGGGTGTGACTTGGCCA
        AGGTCACACAGTGAGGCAGCACTAGAGCTAGGCCTGTCACCAAGGGTAGCAGGCAGTATT
        CAGGCCTTTTCTATAACTCCAGGTCATCTCTCAGTGAAACTTTGTAGGCACCCTGCTGCT

171315  CAGAGTCCTTCAGAGTTGTAGTTCTTATCTTTGTGACTCACCAGAAGCAAATCTTAGACC
        AAATGAGTGTTTCTCAAAACAGAGGACCTGTGGACCTCTGTAGTGTTTCTGTAGAGCCAG
        TTTGGAAAATGTGGCACCAACAAGCGAATGCTTCAGTGCCACTGCAATTGCCAATATGAG
        TACCTAAACCATGGAGTAAATGGTCAGATTGTTATACTGGTATTTAGAATTTTACTGGAA
        TGAAAGCACATATTTTAAAATTCTCATAGAGAACTAGAAGATTGGGAGAATTTACACAGG
        [G,T]
        TTCAGCAGACTCCTGTCTGAAAAATATTGAATTTGTTGGACAACATTGACCAGTGTGAAC
        AATATGGTGCCTTCTAGAGGAGTAATAACAATAGTAATATCAACAATCTCTCTCATTTTT
        ATACCATATTATAGTTTATGTGATATTTCTGTATGAATCATACTACCGGGTTTTGGATGT
        CATAATACTCCTATGAAGTAAACAAGGTGGAATTCATCATCCCATTTTTACAGATGTGGG
        AACTGAGGCTGAGACATTACATGACTGAGCTGCAGAGGAGAAAGACAGGAACCTAATTAA

171400  ACCTGTGGACCTCTGTAGTGTTTCTGTAGAGCCAGTTTGGAAAATGTGGCACCAACAAGC
        GAATGCTTCAGTGCCACTGCAATTGCCAATATGAGTACCTAAACCATGGAGTAAATGGTC
        AGATTGTTATACTGGTATTTAGAATTTTACTGGAATGAAAGCACATATTTTAAAATTCTC
        ATAGAGAACTAGAAGATTGGGAGAATTTACACAGGGTTCAGCAGACTCCTGTCTGAAAAA
        TATTGAATTTGTTGGACAACATTGACCAGTGTGAACAATATGGTGCCTTCTAGAGGAGTA
        [A,G]
        TAACAATAGTAATATCAACAATCTCTCTCATTTTTATACCATATTATAGTTTATGTGATA
        TTTCTGTATGAATCATACTACCGGGTTTTGGATGTCATAATACTCCTATGAAGTAAACAA
        GGTGGAATTCATCATCCCATTTTTACAGATGTGGGAACTGAGGCTGAGACATTACATGAC
        TGAGCTGCAGAGGAGAAAGACAGGAACCTAATTAATGGAGTTTGGCTGTCAGGAATATGA
        CAAAAACCAAGAGATGTGGGCATAAGAATAAGATGATCAGGCTAACCTGATGCTGAGACA

172007  TCACTGAATTAGAATTCCTTAAACCCCTAATAAATTACAACAATAATAACAATGGCAATA
```

```
          ACTTCCACAATTGACTGATTGCTACATTCTAGACACTATGATAAACACTTAAATGCATGT
          CAATTAAACCTTCCCAATAGCCCTTGAGGTTGATATTATCCTCAGATGAAGAAACAGAGC
          TTCAGAAAGGTTGACTTTTCCACAGTCACAAAACATATAAAGTGATGGAGCTGCACTTCT
          CCTCAAGGGCCATGGAATCCCAAAATTTGTGTTCTTATTACCGTGCCATGTGAGTGCTGG
          [G,A]
          CAGGGAGAGTTGGGGAAAGAGTCAGGAAAGAGAGGGGGTTGTCCTGGACAAGACAGCTTG
          AGTTTAAATCTTGTCTACAGTAGCAGCAATAGATCTGACATTCCAACCCAGGCTCTCAAA
          TTCCCATTGGACATCTGTCTCACCATTTACTCCATGGTTTAGGTACTCATATTGGCAATC
          GCAGTGGCACTGAAGCATTCACTTGTTAGTGCCGCATTTTCCAAACTGGCTCTACAGACA
          CACCACAGAGGTCCACAGGTCCTCTGTTTTGAGAAACACTCATTTGGTCTAAGATTTGCT

172220    CATATAAAGTGATGGAGCTGCACTTCTCCTCAAGGGCCATGGAATCCCAAAATTTGTGTT
          CTTATTACCGTGCCATGTGAGTGCTGGGCAGGGAGAGTTGGGGAAAGAGTCAGGAAAGAG
          AGGGGGTTGTCCTGGACAAGACAGCTTGAGTTTAAATCTTGTCTACAGTAGCAGCAATAG
          ATCTGACATTCCAACCCAGGCTCTCAAATTCCCATTGGACATCTGTCTCACCATTTACTC
          CATGGTTTAGGTACTCATATTGGCAATCGCAGTGGCACTGAAGCATTCACTTGTTAGTGC
          [C,T]
          GCATTTTCCAAACTGGCTCTACAGACACACCACAGAGGTCCACAGGTCCTCTGTTTTGAG
          AAACACTCATTTGGTCTAAGATTTGCTTCTGGTGAGTCACAAAGGTAAGAACTACAACTA
          CATTGATGGAATTTTATTAAAATTATTATTTCTAGTGTGACAGAAGCTGAGGAAGAGATG
          ACGGAGTTAGCCCATTCCAGGTCTTATCGGGGTACTTGGGAACCAGGACAGTTGGCCATT
          TCTGCCATGTGCTTGCAGATTAACTCCTGTAGAATGTTAGATTGGAAGTTTTAGTCTATT

172690    AGGAAGAGATGACGGAGTTAGCCCATTCCAGGTCTTATCGGGGTACTTGGGAACCAGGAC
          AGTTGGCCATTTCTGCCATGTGCTTGCAGATTAACTCCTGTAGAATGTTAGATTGGAAGT
          TTTAGTCTATTTGGCAGCTATTCCAAGCCCCCAGCCCCATGCTGCTGCTCCTCTGCGGGA
          TCAGCCCTGAGCAGAAACTGTTCTTTAGTCTCCTTGCTCCCCTGTGGTGATAAATCTGTC
          AGCTCCTTCTGCAAAGCTGAGCTCATCCACTTTCTTCAGTGCCTCTCTTCCTGTTGGCTC
          [T,C]
          GTACCTCACAGTTATGTTTAGTTTCTGCAGCTTCTGGTTAGGCAGGTGGTATAGTAGTTG
          GGAAGGGTGGCTTTGGAGCCAGTTCTGGGTTTGAATTCTGACTTTTATACTTATTAGCTA
          TGTAACATTAGTCAATTTATCTACCTTTTCTGAGTTTTTGTTGCCTTATCTTTAAAAAAG
          AGAATGATATTATGTACATTCTTATAGGGTTTTATGAGAACTAAGTGAGATCCCTCAACG
          CTCTCGGAAATGAAATCACATCTACCTGTTTTATGCTGCCATAGCCCCAGATATTTTTTC

174992    AAGTAAGATTCTGGTCCCATTTTATAAGGAGAAAAATGAAGTTCAAGTTGTTGAAAAACC
          TTTTGTAAAGTCATTTGACTAAAACTGGAATTCAAACTTAAAACCTTTCCCATTCTAAGG
          ATTAGGCTTGTTCTCCATTGGGCCACACTGCCCAAACTGGGGAAACCTTTGCAATTCTTA
          GGACTGGTATTATAATTGAGCAAAGCCAAGAAATAAACTCCTTTCTTCCTTAAACTGCCT
          GGGTTTGAAATCTGGCTCAGCTACTTACTAGCTGTTTGTCCATTGCAAGTCACTTCTCCT
          [C,G]
          TTTGTACCTCAGCTGTCTCACCTATGAGTGGGAATATTAATGTGGATCTCATAAGATAAA
          GATAAAATGAGTTAATGTATGTAAAGTTTTAGAACACAGAGTGCAACAGAAGCCCAGGGT
          CTCATCCTAACTCTGTCACTTACTCATGACCATTTATGCAAATCATATTTTTCTGTAAGA
          TCTCAATTTGTTCTAGAATTGGCATAATGTTTTCAAAAGGAAAAAAATCAGCAAAACAAT
          CTTCCTGCCTGTGTGATTTAGGGTTCTAGTTTTCCTGATTGTCTTCAGTTCAGAGGTATC

176676    TTTTCATCAAAAGATGGGCATGCTATGAGTATTTGCTTGGCCTTTTCTAGATAGGAAGGT
          TTTGATCATGTAAAGGGTAGATGCAATTGGTTTTAAGTCCACTGGGAACTGTAGCCATAA
          GGGCCCACCTCATACCAGGAAATTTGCTCTTGCTCTGAAATGGCCTTGGCCAGGTGTCAT
          TCCTGACCACAACAGTTGGGGCAGAGTAAAGATGAAGGGACTCTCTGGAAGACCAACTAT
          TCCCAGGCCAGGTAGTACACCCATGCAGCCTTGCACTCAATAGCCCAACCTGGAGTCCCT
          [G,A]
          ACCTTCTGCCAGAAAGTGCCAGCATTTTATCCTAAATCCCAGGGCTGAGAGAAATTAGTT
          TGTGAGACCCTGACTGACATTTACAATGCTTTGTCAATACTGGATACTTGTATGAGGTAT
          GTCTGTTGGTGTGTTTGCAGATATCCAAGTGTGCCTCCCTGGTTCCAAATGTAACTGGAT
          AAGTCAACACGAATGCTTTTTTCTTCTCAATATTTATGGTGTTTTCACTGATTTAAGCAC
          AGCTACAATACCTTGTTTAATTAGAGGAAACCAGACTACCCTCTGTGTTACCAGAGATTA

176723    TAGATAGGAAGGTTTTGATCATGTAAAGGGTAGATGCAATTGGTTTTAAGTCCACTGGGA
          ACTGTAGCCATAAGGGCCCACCTCATACCAGGAAATTTGCTCTTGCTCTGAAATGGCCTT
          GGCCAGGTGTCATTCCTGACCACAACAGTTGGGGCAGAGTAAAGATGAAGGGACTCTCTG
          GAAGACCAACTATTCCCAGGCCAGGTAGTACACCCATGCAGCCTTGCACTCAATAGCCCA
          ACCTGGAGTCCCTGACCTTCTGCCAGAAAGTGCCAGCATTTTATCCTAAATCCCAGGGCT
          [G,A]
          AGAGAAATTAGTTTGTGAGACCCTGACTGACATTTACAATGCTTTGTCAATACTGGATAC
          TTGTATGAGGTATGTCTGTTGGTGTGTTTGCAGATATCCAAGTGTGCCTCCCTGGTTCCA
          AATGTAACTGGATAAGTCAACACGAATGCTTTTTTCTTCTCAATATTTATGGTGTTTTCA
          CTGATTTAAGCACAGCTACAATACCTTGTTTAATTAGAGGAAACCAGACTACCCTCTGTG
          TTACCAGAGATTATATAGGGAGAGGACACCTTAAAGGTTTGGTTGGTTAAAGTGGCTAAA
```

FIGURE 3, page 111 of 122

```
176944  CCTTGCACTCAATAGCCCAACCTGGAGTCCCTGACCTTCTGCCAGAAAGTGCCAGCATTT
        TATCCTAAATCCCAGGGCTGAGAGAAATTAGTTTGTGAGACCCTGACTGACATTTACAAT
        GCTTTGTCAATACTGGATACTTGTATGAGGTATGTCTGTTGGTGTGTTTGCAGATATCCA
        AGTGTGCCTCCCTGGTTCCAAATGTAACTGGATAAGTCAACACGAATGCTTTTTTCTTCT
        CAATATTTATGGTGTTTTCACTGATTTAAGCACAGCTACAATACCTTGTTTAATTAGAGG
        [A,G]
        AACCAGACTACCCTCTGTGTTACCAGAGATTATATAGGGAGAGGACACCTTAAAGGTTTG
        GTTGGTTAAAGTGGCTAAAATAGGAAAATGTGAAGACTTTTATGCAGAGACATGGGTATT
        TGAGGACACAATTAAGTCTTCAGCCCAGGAGTATTCCACAAATTCACACATATCCATATT
        CATGCGCACATACCTGTGTGATCATAGAATTGTAGATCAAAGCTGGAAGAGCCCTTAAGA
        GAGAAATCAAGTGGCTCAGAAGTTTCCAAACTTTTTAGTTTGAGGCTCTATTTTCAAATG

178739  CTTACTTTCTTGGTCTTCTATACTTTTTTAGGCTGATAATTCCCACTTTTAAAAAAATAC
        TTCTAATATAAGACTTTTCAAACCACAGTTTCCTATAACTACTCTCTCAATGGAGCTGTC
        ATCTAAGATTTTATCTGACAATTTGGGGAAACTTGGCATGTTCAACCTGTGCCATTCAGA
        GTATACAGTACAAGTTCTTTGATTTTTCTCTCAACTTACCTCCTGTGGATCTCAAGGGGA
        TGGGATGGAGGAAGTGCTCTTTCCAGTGTCCCAGGATTGTTTTAATAAACCTTACTTGCC
        [C,T]
        GTTTCCTTGAACAATGTTAGATGCTCCTTCTTCCTTCTGACTGGTGTGGTGTCAGCACAG
        GCAGGATGATGAGGGCTGAACAGCTCGTATGTGACCCCTTGAAAGAATCCCAGAGCAAAG
        GAAATCCAGCTTTGAAGATAAAGCCTTTCATCCTTCGATAGCTATGTTCCTATACACCTG
        CTTCATGTTCTCTCAGGCTTCTTGCCTGACCCAGTCCCTGTATTTGAAGCAGTTCTAACA
        CCTAACCTCTTTTGACCCAATGATAATGATAATGGTGAATGTGATGATCATAATAATAGC

179524  ATTGCACGTGATAATTAATAGTCATAATGATGGCCCAGAGCCTCTTCAAGATTCTTAAAG
        CATTCTCCAAATCTTCACAGCAAGATGAAAGCATGTCCAATGTAGTTGTAGTGTTAAACA
        CCTCTTTAGGATATCATAATTACTTGAAATGCCTTTTCATTCTAATCCTTTGAAAATTAT
        AATTGGCATATGATAGATGGAGTGACTATATTAACTAGTTTACTTAATTGAGCGCATTTA
        CTCCCCATCATTGTACTCAAATGCCTTTTCAACATTGTGTTACCTCCTACAGTGGATATA
        [G,C]
        AGAGGAGACAGATTCTGTTCTCAACTAATCCTCTCACCAGCCATATAACCTTAAGCCACT
        ATTCCCCTCTTTGGGCCTCAGTTTCCCTATCTGAACAATATGAGGGGTTTGTTTTACCTC
        CTACAGTGGATATAGAGAGGAGACAGATTCTATTCTCAACCAATCCTCTAACTGGCCATA
        TAACCTTAAGCCACTATTCCCATCTCTGGGCCTCAGTTTCCCTATCTGTACAATATGAAG
        GGTTTGGTCTTCTCTCCAAAATCTTTGCTCCTGTATAGGTCAAAAGTCAGCAAACTATGG

179726  TGACTATATTAACTAGTTTACTTAATTGAGCGCATTTACTCCCCATCATTGTACTCAAAT
        GCCTTTTCAACATTGTGTTACCTCCTACAGTGGATATACAGAGGAGACAGATTCTGTTCT
        CAACTAATCCTCTCACCAGCCATATAACCTTAAGCCACTATTCCCTCTTTGGGCCTCAG
        TTTCCCTATCTGAACAATATGAGGGGTTTGTTTTACCTCCTACAGTGGATATAGAGAGGA
        GACAGATTCTATTCTCAACCAATCCTCTAACTGGCCATATAACCTTAAGCCACTATTCCC
        [A,G]
        TCTCTGGGCCTCAGTTTCCCTATCTGTACAATATGAAGGGTTTGGTCTTCTCTCCAAAAT
        CTTTGCTCCTGTATAGGTCAAAAGTCAGCAAACTATGGTCCCTGTGTCAAATCCAGCCAT
        CACCTGATTTTATATGGCTCATGAGCTAAGAATGATTTTTTACATTTTTTAATTGTTGGG
        AAAAAAATCAAAAGAATGATATTTTATAATATGTGGAACTATATGACATTAAATTACCAT
        GCCCAAAAATATTGGGACAGCCATGCTCTTCCAATTACTATATGCTAAATAGTAATAGTA

179901  CTCAGTTTCCCTATCTGAACAATATGAGGGGTTTGTTTTACCTCCTACAGTGGATATAGA
        GAGGAGACAGATTCTATTCTCAACCAATCCTCTAACTGGCCATATAACCTTAAGCCACTA
        TTCCCATCTCTGGGCCTCAGTTTCCCTATCTGTACAATATGAAGGGTTTGGTCTTCTCTC
        CAAAATCTTTGCTCCTGTATAGGTCAAAAGTCAGCAAACTATGGTCCCTGTGTCAAATCC
        AGCCATCACCTGATTTTATATGGCTCATGAGCTAAGAATGATTTTTTACATTTTTTAATT
        [G,T]
        TTGGGAAAAAAATCAAAAGAATGATATTTTATAATATGTGGAACTATATGACATTAAATT
        ACCATGCCCAAAAATATTGGGACAGCCATGCTCTTCCAATTACTATATGCTAAATAGTAA
        TAGTAAATTACTATTTTCTATATATGGCTACTTTCATGCTGCAATGGCAGAGCTGACTAG
        TTGTGACAAGAACCATATGGTTTGCAAAGCCTAAAATATTTATAATCTGGCCCTTTACAT
        AAAAAGTTTGCTGACCCCTTGCATAGATGTGGAATAGGGGGACACTAATAGGCTTCAGAT

180348  GCTACTTTCATGCTGCAATGGCAGAGCTGACTAGTTGTGACAAGAACCATATGGTTTGCA
        AAGCCTAAAATATTTATAATCTGGCCCTTTACATAAAAAGTTTGCTGACCCCTTGCATAG
        ATGTGGAATAGGGGGACACTAATAGGCTTCAGATAAACTAGACACTTTGGAAGCATCTAA
        AGACCCTTAGGAGGTTAGTGTCAAGGAGAGGAACCTAGCGCAGTCCCACAAATATTCGTT
        CAAGAAAGACAGCTACATTTGAAGGCCCCTGCTCTGGCAGGGTGACATATTCTGGCTATT
        [A,C]
        ACTGTGCCAGCCACAGTCTGAGGTTCATTGTCCCTCTTTGTCTGGAGCAATCTTGACACA
        CCATCCTAAAGCTAAAGTCATATGTTTCTCCACTGGTGGAGCAGTAGAACACATTTGTGA
        AGAAGACAGATTTTATAGTTGGACCACAGTTTGAATTCTTGCTTGCTGTGTGATCTCAGG
        GAAATTTCCAAAGGTCTCTTAACCATAGCTCCTTAACAGAAAATTAGGATGGATACTCAC
        TCACTCATTTATGCAAATAAGTATTGGGTGTCTACTGTGCACATTTACCTCTTGGAATTG
```

FIGURE 3, page 112 of 122

```
180459   CTTGCATAGATGTGGAATAGGGGGACACTAATAGGCTTCAGATAAACTAGACACTTTGGA
         AGCATCTAAAGACCCTTAGGAGGTTAGTGTCAAGGAGAGGAACCTAGCGCAGTCCCACAA
         ATATTCGTTCAAGAAAGACAGCTACATTTGAAGGCCCCTGCTCTGGCAGGGTGACATATT
         CTGGCTATTAACTGTGCCAGCCACAGTCTGAGGTTCATTGTCCCTCTTTGTCTGGAGCAA
         TCTTGACACACCATCCTAAAGCTAAAGTCATATGTTTCTCCACTGGTGGAGCAGTAGAAC
         [A,G]
         CATTTGTGAAGAAGACAGATTTTATAGTTGGACCACAGTTTGAATTCTTGCTTGCTGTGT
         GATCTCAGGGAAATTTCCAAAGGTCTCTTAACCATAGCTCCTTAACAGAAAATTAGGATG
         GATACTCACTCACTCATTTATGCAAATAAGTATTGGGTGTCTACTGTGCACATTTACCTC
         TTGGAATTGTTTAAGTAATTAAAGGATTATGTATATAAAGCATTTAACAGAATGCCTGAC
         TCAGGAATAGAGCTTGGAAAATGTTTAAAATACATCTCAAACAATTATTATTCTTTTGTT

180786   GTTGGACCACAGTTTGAATTCTTGCTTGCTGTGTGATCTCAGGGAAATTTCCAAAGGTCT
         CTTAACCATAGCTCCTTAACAGAAAATTAGGATGGATACTCACTCACTCATTTATGCAAA
         TAAGTATTGGGTGTCTACTGTGCACATTTACCTCTTGGAATTGTTTAAGTAATTAAAGGA
         TTATGTATATAAAGCATTTAACAGAATGCCTGACTCAGGAATAGAGCTTGGAAAATGTTT
         AAAATACATCTCAAACAATTATTATTCTTTTGTTTTTTAAATTACAGTAACCTCAAAACTC
         [C,T]
         TAAAAAGCTGTTTGAATAAAGTTATATAATGCATACAAAGGGGCATTTTTAGCCATTATT
         GTCATTTTTGTTCTTATAAGCAATGCTTCTGAAGCCGTTTTCAGTGGAGCACTTAACAGC
         ACCAGTGTGCTTTAATTTCAGGCCAGGAGATAAAAAATTAAGCAGGGCTCTCTTAAAAGA
         CCATAACAAAGCTTCAACAAATGCAACAACTTCTCTCCCCTGTCTTGCCACTGCTACTCT
         GTCCCCCACTTTCCAGTGACTAATGGATGATATCTAAGATACATTAGAGCTATCTGAGGA

181129   GCATTTTTAGCCATTATTGTCATTTTTGTTCTTATAAGCAATGCTTCTGAAGCCGTTTTC
         AGTGGAGCACTTAACAGCACCAGTGTGCTTTAATTTCAGGCCAGGAGATAAAAAATTAAG
         CAGGGCTCTCTTAAAAGACCATAACAAAGCTTCAACAAATGCAACAACTTCTCTCCCCTG
         TCTTGCCACTGCTACTCTGTCCCCCACTTTCCAGTGACTAATGGATGATATCTAAGATAC
         ATTAGAGCTATCTGAGGATCGATTTTTATTTTTTAATAGTATTAAAAATACAATATATTC
         [A,G]
         CATGATAAAACAGATATTACAGAAGGGTATAAAGTAAAAGATAAATGCCCATTCTTTCCA
         ATTCTATACTTCATAGAAGTAACTATTTTAAACCCTTTTCCTGCATTTGGTTATTTAATG
         GTTTCCTTTACACTTCTACATCATATATTTATGTTTCTTTTTCTTGCTTTATCAACTTTA
         ACTCCATATCTGACTTCCCATTAGAAAGATGACAAATCAGCTCATATTACACCCCCAACA
         TCCCCTTCTCAATGTTTGTTAGCCTATATGCTATTATTTGGAATTCTTCTGATGATTACC

181918   GGTCAATTTCTTTGCATTTAATAATGACAGTAGACACAGCATTCTTTCTCACCGATTTAT
         TAGTCACACATGGGGCAATGTGAAATGCTACATAGGTGCAGAAGAAGCAGACAAGAACAC
         AGTGACCTAATAGCCCTAGGAACTCACTCATCACCAAGCTTCACTTTAGGTGAGAAACAG
         TCACTCAAAGAGAAGCATCTGGTACCAGTGCTGGGAGGTCAGTGGAAGGAGAGTGGGTTT
         AGACCTGCATTCTTGTGCTGAATAGCTGGAAAAACACTTGACTAACCTGAAAAACAAGTA
         [C,T]
         TCTGTAGATTAATTTCATTTTTTTTTTTGTCAGTAGTAACAGTATATAGAGCAATGGTCCC
         AGCATTTGGGAACATGTTGTAAATAGGCAAAGTGGCTCAAAGAGAGTAGTAATCAAACTT
         CGTAGTTAAAATTTTTAATAGAATATAATTAGCAATGTAGTATTTTTATATAATACTATA
         TAATTAATAGCACAAATAAAGCACATAAAGAAAAATGTTCTAATTACCAAATATTACCCT
         CTAAGGTTTTTTTTAATAAAATGGCAAAGAAAATTAGAAAATTATTTAATTAAACCTTAT

181936   TAATAATGACAGTAGACACAGCATTCTTTCTCACCGATTTATTAGTCACACATGGGGCAA
         TGTGAAATGCTACATAGGTGCAGAAGAAGCAGACAAGAACACAGTGACCTAATAGCCCTA
         GGAACTCACTCATCACCAAGCTTCACTTTAGGTGAGAAACAGTCACTCAAAGAGAAGCAT
         CTGGTACCAGTGCTGGGAGGTCAGTGGAAGGAGAGTGGGTTTAGACCTGCATTCTTGTGC
         TGAATAGCTGGAAAAACACTTGACTAACCTGAAAAACAAGTACTCTGTAGATTAATTTCA
         [-,T]
         TTTTTTTTTGTCAGTAGTAACAGTATATAGAGCAATGGTCCCAGCATTTGGGAACATGTT
         GTAAATAGGCAAAGTGGCTCAAAGAGAGTAGTAATCAAACTTCGTAGTTAAAATTTTTAA
         TAGAATATAATTAGCAATGTAGTATTTTTATATAATACTATATAATTAATAGCACAAATA
         AAGCACATAAAGAAAAATGTTCTAATTACCAAATATTACCCTCTAAGGTTTTTTTTAATA
         AAATGGCAAAGAAAATTAGAAAATTATTTAATTAAACCTTATTTAATGAGAGTTCCCAGG

183558   GCATTGCTCTAGGAGCAGGTTCTAGGACACATCAGTGACCAAGACAAAAAAGGTTCCTGC
         TCTTAGGAAACTGACATTTCAATAGGAGGAAAGAGGCTATGGGAACACATGAGTAAACAA
         GATAATCTCAAATGGTGATAAAAACTCTGGAGAAGCTCAACAGGGCACTGAGATAGAGC
         AGACTGGATAGGGTGCTGGGGGTAACTCTACTATGTTCTTCCAGAAGCAGTTCCCTGAAA
         CAAGGATTCAAGTACAAGGGGCTTCTTGGGTGCCAATCCTAAAAAACCAGGGAAGGGAGG
         [C,T]
         AGAGAAGGGAAGTCTGCCTACAAAGTTTCATAAACAAGATGCCTACACTGCAGGCTACTG
         AAGGAGAACAGTCCCTGAGGGGATCCCAACATGTCAGTGTAGAACTCACCTCAGGGTCAT
         GCCATGCAGGGGAGAGGATTCTGGGGCACTTATCTACTGACTCTTCATCTGTCATTGATT
         GAAAGCTGCTTCTGGGCATATTAACTCCTTAACATGTCTAACTTAGCCTGCAGGTAGGCG
```

FIGURE 3, page 113 of 122

```
                    GAGTAGCCAGGTGTTTGCAGTTGGTACGTAAAGTAGAATACCCATGTAGAAAGGGGAGTG

      184778        TTTCTTCCTGCTGGGCAGGCCCCCAATTATACCTAAAAGAAACCCAAGTTAACACAAGGC
                    TCTATGTGACCAGCTTTGGGCTGCCAATTTGACCTCCTTTCCCACCCTTTCTCTTCAAAC
                    TCACTGTGCCACAATCACACCAGCCTCCTTACTGTTTCTTGAATATGCCAATCATCCTCT
                    CACCTCTGGGCCTTTGCTCAGAATGCTCTTCTCCAAATATCCCCATAGCTCAGACACAGG
                    CATCACTTCACTCAGGTCCCTAAGCCAAGACCACCTCCTTGCGGAGGCTCATCCTCATCA
                    [C,T]
                    TCCTTCCAAAGCATGACACTGCCCCTCCCCATCCTCTTACCTCACTTTATCCTTCATGGG
                    GCTCATTGCTACCGCAGAGTATACTATCCCAGATTATACTATACTATGCTGCATATTTAC
                    TTGTTCATTTATTGTCTGTCTTCCCCACTAGAATATAAGCTCCATAAGGGAAGAAACTTG
                    CTTTATTCACTATTAGAATAGTGCACTATGACTTTTCAAAAATGTTTGTTGAAATGATTA
                    ATCAGTGAATAAGTGAGTGAGTGACTGAGTGAACCAATGCCTAACAGAGGCCCTTAGTTC

      185666        GGCCTCATGGAGTGGTGAAAATTTACCCTGTTGTATGGAAAAGAGCACAGGGTGAGGATG
                    GAGACTGGGATCAGAACTCGGCCTCTTCCACAGACTTGCTGGTGTCCTTGGGTAACTCAT
                    AGGAGCTTGCCCAGTGAAATTCAGATTCCTCTTCTCTCAAAATGGTTGGGTATTGGGATG
                    GTAGACGAGATTATTCCCTCCTTAGAGGTTTCTACCTTGTACTATATATCTGCATCATCA
                    TAATAATCACAGCCACTATTTATTGATCACTTGGTCTGCCCCATGCACTTGACATGTGTC
                    [A,G]
                    TTGCATTGTATGTTTACCCCAACAACCAGACCTCCATTATTCAGACAAGAAAACTGTCAA
                    GTAACTTAGTTAATAGTGGTATAACTACTGGCTTATGCATAGCAGCGCCCAGCACTCCAAA
                    CTAGGCATACTGGCTCCTGAGCTGTGCTAATTTTGTGCACAAACTAAGTAATAATCAAGT
                    TCAAAGGAAAGGAGGCCTAACTGTCTCTCCATTGAGTAGGTTTCATCTGGTGGAACTGAA
                    TGGAAAATCCTGTGGTTTTGGAACAGGTTAAGTTGATTTATCCAGGCAGCATGTTCTAAC

      185832        TGGGTATTGGGATGGTAGACGAGATTATTCCCTCCTTAGAGGTTTCTACCTTGTACTATA
                    TATCTGCATCATCATAATAATCACAGCCACTATTTATTGATCACTTGGTCTGCCCCATGC
                    ACTTGACATGTGTCATTGCATTGTATGTTTACCCCAACAACCAGACCTCCATTATTCAGA
                    CAAGAAAACTGTCAAGTAACTTAGTTAATAGTGGTATAACTACTGGCTTATGCATAGCAG
                    CGCCAGCACTCCAAACTAGGCATACTGGCTCCTGAGCTGTGCTAATTTTGTGCACAAACT
                    [A,-]
                    AGTAATAATCAAGTTCAAAGGAAAGGAGGCCTAACTGTCTCTCCATTGAGTAGGTTTCAT
                    CTGGTGGAACTGAATGGAAAATCCTGTGGTTTTGGAACAGGTTAAGTTGATTTATCCAGG
                    CAGCATGTTCTAACTTCTCCCTCCTCCCCCTCTCACAGGGCTTCATGGACATTGACTTAA
                    ACAAATTCAAGGAGAGTGGCGCCAATGTGACAGGTTTCCAGCTGGTGAACTACACAGACA
                    CTATTCCGGCCAAGATCATGCAGCAGTGGAAGAATAGTGATGCTCGAGACCACACACGGG

      187287        CTGAAGTCAAACCAGATAGCTTGACAGTGGCCATATGGAACCCTGTGTTGAGAAGGATAC
                    TAAGGCCAAGTTTGTTTATCTGGACAAACAGTGAATCTTTGACAGACTTTCTCTTGCCAC
                    TCAATCCATTTCTTTTTATAAATGGCAAACCGTATAACGGAGATACTTCTTATCCCACTA
                    TTCAAACTGATTTAACTCTTCAATAATGAAGACTTATTTCAATATGATCTTAAGCAAACA
                    AAATCGCAAATATGCTTTCAAGCAATGAGAAAACTACATAGGAATTAATTAAGTAATGTG
                    [C,T]
                    AATGATTGCACTCCAATTTCCAAAAGACTGAGCAGATGACAAAAATAACCAAATGTAATT
                    TAATTTTTTTTTTTTTTTGAGATGGAGTCTGGCTCTGTTGCCCAGGCTGGAGTGCAGTG
                    GCATGATCTCGGCTCACTGCAAGCTCCACCTCCCGAGTTCACGCCATTCTCCTGCCTCAG
                    CCTCCCAAGTAGCTGGGACTACAGGCACCCGCCACCACGTCTGGCTAATTTTTTGTATTT
                    TTTAGTAGAGATGGGGTTTCACCGTGTTAGCCAGGATGGTCTTGATCTCCTGACCTTGTG

      187351        GCCAAGTTTGTTTATCTGGACAAACAGTGAATCTTTGACAGACTTTCTCTTGCCACTCAA
                    TCCATTTCTTTTTATAAATGGCAAACCGTATAACGGAGATACTTCTTATCCCACTATTCA
                    AACTGATTTAACTCTTCAATAATGAAGACTTATTTCAATATGATCTTAAGCAAACAAAAT
                    CGCAAATATGCTTTCAAGCAATGAGAAAACTACATAGGAATTAATTAAGTAATGTGCAAT
                    GATTGCACTCCAATTTCCAAAAGACTGAGCAGATGACAAAAATAACCAAATGTAATTTAA
                    [T,-]
                    TTTTTTTTTTTTTTTGAGATGGAGTCTCGGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCAT
                    GATCTCGGCTCACTGCAAGCTCCACCTCCCGAGTTCACGCCATTCTCCTGCCTCAGCCTC
                    CCAAGTAGCTGGGACTACAGGCACCCGCCACCACGTCTGGCTAATTTTTTGTATTTTTTA
                    GTAGAGATGGGGTTTCACCGTGTTAGCCAGGATGGTCTTGATCTCCTGACCTTGTGATCC
                    ACCCATCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCCGGCATGT

      187706        TGGCATGATCTCGGCTCACTGCAAGCTCCACCTCCCGAGTTCACGCCATTCTCCTGCCTC
                    AGCCTCCCAAGTAGCTGGGACTACAGGCACCCGCCACCACGTCTGGCTAATTTTTTGTAT
                    TTTTTAGTAGAGATGGGGTTTCACCGTGTTAGCCAGGATGGTCTTGATCTCCTGACCTTG
                    TGATCCACCCATCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCCG
                    GCATGTAATTTAACTTTTTAAAAAAGAAGTGAGAGAATTAAATTTAAAAAAATTAGAAAAA
                    [C,T]
                    ACCCATTCATTCGTTCTTCAATTCTCTATTGTGAACTTGGAGTGTGCTAGGCAACATAAT
                    AAGTATTAGGAACAAATTAGTGAAGAAAACAGACATAGGTTCCAAAGCCAGGATATATTT
                    TCCTGGACTGCTCTCCTGATTTTGTTTCATCCACATCCTAGTCCCCTTTTTGTCAGGAGA
```

FIGURE 3, page 114 of 122

```
                GGGTATAATTGATAGTTGTTGTGAGAAAGAATGAGGGGAAAGTTTACAGGATATAAACTT
                ACCACTTAGGTAAGCCATATGTGGAAAAAATTAGGAGCTCACCCTTCTTTCATTTTCTTT

      188282    AGCTCACCCTTCTTTCATTTTCTTTTTGCTTTTTACTTTTACAAGAGATGAAAGAGTTAAT
                CGTTCCTCTTGGTTTCCAGCTGATGACTGTAATGCCGGGATAAACCAGCTGATTTTTCAT
                GAACTGTATCCAGCCTGCAGATGTGTTATATGTAATCTATGCATTTTTTCCCAAATGAAC
                CAACATTTTAAAAATTGCAAGATTGCACACAGAAACCTAGAATCCTGGCTTCTCTTCAAA
                AATTATAACTGGCAGTACTGAACTCACAGTTCAAGGAGGTCAGCATTGACTAGCATGGTC
                [A,G]
                AGCAGCAGCACCCATCTGCTTGAATATTTATGCTTCTCAGGGACACCATCCCTGATTCAC
                CACTGTCTGCCCCACGTATACCATGCATCTGGCCCACTGCACACCCTTCTCATCACCAGA
                AAACACATTCCCAAATACAGCACCCAAACCTGCCTTCCTGTCAGCTCTCTTTGATACCTA
                ACTGTCTCCATTCCTCCCACTAGTACACCTCTGCGCTCACCTACGATGGGGTGAAGGTGA
                TGGCTGAGGCTTTCCAGAGCCTGCGGAGGCAGAGAATTGATATATCTCGCCGGGGGAATG

      190074    ACTTTCACAACCAGGAGAAAGAGATGCTGAAGGAACCTCACCAGCTGTTCCTCAGCCCTG
                ATGAGTGCCTTTCTGTAGAGAAGAATATGTAGGTCTGTCCTTTGAAATGAAGCTAAGCAG
                GATTTCTACTAGCTACATGAGGAACATGCTAAGGAGGACCTCCAGCTGCCATTTCTGCCC
                TCCCCTGGTCCCTGTGCAGGGTGGCTCCCAAGTCACTAGGCAGCAACAACAGACACCAGG
                CAGCTTGCAGGGGAAAATTGCCAAATGGACAGTGCCTGCGCCTCCCTTTCTACCCCCACC
                [C,T]
                CAGCTTATTTAAAATGCTCTTCCAGACTCCACAGTCGAGACAGATTCTGTTTGCAATGTG
                AGGCTGGTTTCAAAAGGTCCCAGAGATTTGTCCTCAGCTTCACAACCCTTCCAACTCCCT
                TGCCTCTCCCATCTTAATGACGTCCTGAAAGGATAGTCTGATGCCACCATGACAGTGATG
                AAGCCTGGGAGGCAGTTCAGGGTGGCAGGAAGGACTCTGTACTGGGAGGCAGGAGAGCTG
                GACTCCACGTCCAGCTGGGCCCCTGGCTCTCTGGATGACCTTGAAACATTCACTTAGCTC

      193266    TGGATGGGGATGTCAATGATACCCAGCAAGAGACGAGGTAGGGTGAGGGTACAAGAAAGG
                ACTTGCACATGTCACATTGGCCTGTTAAGGAATTAGGGGATAGAAGAGCTGGGTTCCAACC
                GTGGCTCCACGCAGAACTATCTGGGGGATCTTGGACTAATTGCTTGCCTTTTCCAGATCT
                GGATTTTTCCTGTCTGCTAAACAGACATAATCCTCCTAGTGCTGCCTCCCTGACTGGCTT
                GTCACAGGGCTCAGAATTTTAAGAAAGCATCGTGCTTGTGGGCCAAGCATCGTGGTTCAT
                [A,G]
                CCTGTAATCCCAGCACTTTGGGAGGCTGAGGTGGGCAGATCACGAGGTAAGGAGTTTGAG
                ACCAACCTGGCCAACATAGTGAAACCCTGTCTCTACTAAAAATACAAAAAGTTAGCGGGA
                TGTGTAGCAGGCACCTGTAATTCCAGCTACCTGGGAGGCTGAGACAGGAGAATCACTTGA
                ACGCAGGAGGCAGAGGTTACAGTGAGCCGAGGTTGTGCCACTGCATACCACACCAGCCTG
                GGTGACAGTGTGAGACTATGTCAAAAAAAAAAAAAAAAGCATCATGCATGTGTTTCTTTGA

      193763    TTACAGTGAGCCGAGGTTGTGCCACTGCATACCACACCAGCCTGGGTGACAGTGTGAGAC
                TATGTCAAAAAAAAAAAAAAAAGCATCATGCATGTGTTTCTTTGAACTTCAGGGAAGCTGC
                ATGAGACAGTCAGAGCCAAGATTATTCTTCCCATGACTCAGGTAGGAAAGTGAAGCTTAG
                GAGGGTTCTGAGATTTGCTCTGGCCAGAGTACCTAGAATGTGACCCAGCAAGGACCTAGT
                CTACAGGCCTCACAGCCAGTGAGCATCCAGGAGGAAGGATCCACCTGAGGGCAACTGCAA
                [G,A]
                GGGGATACAGGAGCCCTGCGTCCAGTTTGACTGCTCGGCTGTCTCCTTCAGGACTGCCTT
                TCAGGATCCAATGAGGGCAGGGGAGAGCAGTCACTGTTGACACCTGACAAAGATTCTTTG
                CTTGACCAAACTTTAGTCAGGCTTCTGAACCTTCTCCTAGGCCCATCTGTGCAATTCTTG
                TGAAATCCAGTTTTGGCAAAGAACTTGCTAAGTCGGTTTAGCAAGAACCCTGTCCACCAC
                GTCCACCCTCTTTGCCATGATCATCTTCTTCAGCCCCCACCATCCCCCAGATTATGTCGG

      193782    TGCCACTGCATACCACACCAGCCTGGGTGACAGTGTGAGACTATGTCAAAAAAAAAAAAAA
                AAGCATCATGCATGTGTTTCTTTGAACTTCAGGGAAGCTGCATGAGACAGTCAGAGCCAA
                GATTATTCTTCCCATGACTCAGGTAGGAAAGTGAAGCTTAGGAGGGTTCTGAGATTTGCT
                CTGGCCAGAGTACCTAGAATGTGACCCAGCAAGGACCTAGTCTACAGGCCTCACAGCCAG
                TGAGCATCCAGGAGGAAGGATCCACCTGAGGGCAACTGCAAGGGGGATACAGGAGCCCTG
                [C,T]
                GTCCAGTTTGACTGCTCGGCTGTCTCCTTCAGGACTGCCTTTCAGGATCCAATGAGGGCA
                GGGGAGAGCAGTCACTGTTGACACCTGACAAAGATTCTTTGCTTGACCAAACTTTAGTCA
                GGCTTCTGAACCTTCTCCTAGGCCCATCTGTGCAATTCTTGTGAAATCCAGTTTTGGCAA
                AGAACTTGCTAAGTCGGTTTAGCAAGAACCCTGTCCACCACGTCCACCCTCTTTGCCATG
                ATCATCTTCTTCAGCCCCCACCATCCCCCAGATTATGTCGGATCATCCTCGTCCATCTTC

      194094    CTGCTCGGCTGTCTCCTTCAGGACTGCCTTTCAGGATCCAATGAGGGCAGGGGAGAGCAG
                TCACTGTTGACACCTGACAAAGATTCTTTGCTTGACCAAACTTTAGTCAGGCTTCTGAAC
                CTTCTCCTAGGCCCATCTGTGCAATTCTTGTGAAATCCAGTTTTGGCAAAGAACTTGCTA
                AGTCGGTTTAGCAAGAACCCTGTCCACCACGTCCACCCTCTTTGCCATGATCATCTTCTT
                CAGCCCCCACCATCCCCCAGATTATGTCGGATCATCCTCGTCCATCTTCAGCAAGAATCC
                [T,C]
                CTTAGGCCATTTTAGCCAGAATTCCTCTTAACCCCGATGCTTGCTGTTAGCAATTTCCTA
                TCCACTGACCCCCACCCTGCTCCTTGGCTATATATTCCCACGGGCCCATGCTCTATTCAG
```

FIGURE 3, page 115 of 122

```
        AGTTGAGCCCAATCTCTCTCCACCTCTGCAAGACCCATTGCAGGGGTCTCTATACCTATT
        GCTACGATTCTGAATAAAGTCTTCTTCACTGTGCTTTAACAAGTGTGCTGATTAATTTTT
        TCTTTAACACAGCTGAAGTAATAGAGACATTAACCCGCATTCTCTCAGCACCAAGCAGGA

194499  CCCATGCTCTATTCAGAGTTGAGCCCAATCTCTCTCCACCTCTGCAAGACCCATTGCAGG
        GGTCTCTATACCTATTGCTACGATTCTGAATAAAGTCTTCTTCACTGTGCTTTAACAAGT
        GTGCTGATTAATTTTTTCTTTAACACAGCTGAAGTAATAGAGACATTAACCCGCATTCTC
        TCAGCACCAAGCAGGAAAAGGAAATATATGCTTCAGCCTCCCATCAGCAGCAGACTCTGAG
        CTGGCACCCAGTACCCTTTACAGGAAGCCCAAGGTTAATTCTCCATCTTTCATGGAGGGA
        [G,A]
        TTGAGGGCGCCAGGATGGCGACAGAAGTTCCGGGAGCAGGAACCAAGAAGAAGTGCCTGG
        GCTCCATCAATCTGACCTCAGACACCCTGGGATGGGGGGAGAGAGGGATAAGTGCCCAGA
        TCCCAGAGCTCAGACCTGATGGATGGGGACAGTGGTTTCAAGATACACATTTCTGAGAAG
        CTTCTTCCTCTGTCTCTGAGTCCTGACTCTCCTTGATAAATGGTTTGGGGCTGAGCCATT.
        CTCTTGAACTCTCCTTGCTCTGCCATCATGGAATGGTGTTTCTGGGATGTCTCTTTCGCA

195249  TGTGAAACAGGCAAAATAACGTCTGCTCTGGCTACTCACTGGGTTTCTGTGAACATGAAA
        TAAGCAGCTTCTTGTGAGATCACCGTGACAGTGCAAGGGGTCCTTGGGTCACTAGAACTG
        TGCAGGTAGGACCCTTGACCTTATTGGAAACTGAGGAAGGCAGTAAAAGTGTCAGTGACA
        TGATCCTTCTTTCTTCTGAAAGAGTCCCCTTGTCTTAGACAACCTACCAGCCCCAAGGCC
        TCAATTTTAGATTTTATTTTTCATAACTTTTACCCACTCTACACAGCACAGTAGTAGTAG
        [T,C]
        CGTCATTATCATCATTATTATCATCTAAATAATATAAACTATGCATTGAAAACTTATGTC
        CCAGACAATGTGCTAAGTACTTCTTGGAGGAGGAAACTAAGAAGCAGATAGTTTGAGCAA
        GGAACCTATGGTCATACAGTTAGAATGAGCAGAGCACAACCTGGGAAATGCCCAGCAGCA
        ATAGCAGAAAGCAGGTAGAAAACACTACATTGCACATTTTTGTGTTGTCCTCCTGAAGCC
        TAGCACAATAGCACTGGCCTGTGTTTCGGCGAACACTTGGTACCTTAAGTGAAGATACCA

197371  TTAAGATAAAAAAAGGGCAGAGATTTTTGGAAACTGAAGGCTTAGAGAGCTAAATTGCCT
        GAGGGCACTTGGCTATTAAGGATTAAGCTGGGGTTAAATCCAAGTCTTTCAATTGCCAAG
        TATTTTATTCCCTGGACTCAGGAATAAAGAAGAAATTCTTAAAGGAATTAAGAAGCCATC
        TCCAAGCATAGCTTAAGGCTTCATTCATAAAGCTGGCTTCTTGTCCTGGGTCTTCTGACT
        CATTAGTGATGGTGCACCATTTTCTTTCCTTTGCAGGCCCCCCATACTTTCTTCATCTTC
        [A,G]
        GATGTGTATCTGAGAAGGGCAGTGGTCATAGTGGTTGTGTGATGGGAGGTGTTTGGTTAG
        GGATGGTGCAGACATTTCACATTAGTATGCACTCTGACCCATTGTTAGTATTTGCCTAAA
        GAAATAGGTAAAAACAATTGTCAGGATGAATCCCAATTTAGGGAAAAGAGATCTGTAATG
        CATCCCTTGCCTGTGGCAAGGGAGTGAAGAGTTTTAGCATTCAGGATACTCCAAGACATC
        ATTCCATGGAACACTCTTGGGTTCTGAATTTCTACTTCAGTGGAAAAAGCAAACACACAT

198021  CGATTTGAAGGTTTAACAGGAAACGTGCAGTTTAATGAGAAAGGACGCCGGACCAACTAC
        ACGCTCCACGTGATTGAAATGAAACATGACGGCATCCGAAAGGTAAGGTCCCCCTTTACT
        TCTGTTCTGCAGAGAGAAGAGGCTGAGCAGGGACTCTGGCCAGAGCTGAGGGCCTGTGAG
        TCCACCTTTTCTGGACTGGATCTTTGAAGAAACTCAGACAACACAGATTCTAGACTTGGC
        TCTGCCACTAACCAGCTGGGACATTGGGCAAGTCTCGTTCTTCCTCTGAGAATCCATTCA
        [T,C]
        TCATTTGCAAAATTAAGTTTAAAAAAATCTCTACATTTGTCCCAGGATGCTTGTGAAAAT
        CCAAGGTAGAGGAAAGCACTTCTAAAACATAAAGTAATTGATGTGTATAAAATGCCACTC
        CCATTCCTGAGGGTTTCTAAACTAAGAACTTGAGAATGATGATTATTGATGAGGTTAACT
        ATCTCTTCCTAATCGATAGTTGGTCATATCCACTCTATTATTTATACAAAAGTAAGGGTG
        AAAATATATATGTTTACATATATGTATAATGTATAATATGTTTGCATATGAAAATTCTTA

198039  GGAAACGTGCAGTTTAATGAGAAAGGACGCCGGACCAACTACACGCTCCACGTGATTGAA
        ATGAAACATGACGGCATCCGAAAGGTAAGGTCCCCCTTTACTTCTGTTCTGCAGAGAGAA
        GAGGCTGAGCAGGGACTCTGGCCAGAGCTGAGGGCCTGTGAGTCCACCTTTTCTGGACTG
        GATCTTTGAAGAAACTCAGACAACACAGATTCTAGACTTGGCTCTGCCACTAACCAGCTG
        GGACATTGGGCAAGTCTCGTTCTTCCTCTGAGAATCCATTCATTCATTTGCAAAATTAAG
        [T,A]
        TTAAAAAAATCTCTACATTTGTCCCAGGATGCTTGTGAAAATCCAAGGTAGAGGAAAGCA
        CTTCTAAAACATAAAGTAATTGATGTGTATAAAATGCCACTCCCATTCCTGAGGGTTTCT
        AAACTAAGAACTTGAGAATGATGATTATTGATGAGGTTAACTATCTCTTCCTAATCGATA
        GTTGGTCATATCCACTCTATTATTTATACAAAAGTAAGGGTGAAAATATATATGTTTACA
        TATATGTATAATGTATAATATGTTTGCATATGAAAATTCTTAGAATAGCATTCAAATCCT

198143  TGTTCTGCAGAGAGAAGAGGCTGAGCAGGGACTCTGGCCAGAGCTGAGGGCCTGTGAGTC
        CACCTTTTCTGGACTGGATCTTTGAAGAAACTCAGACAACACAGATTCTAGACTTGGCTC
        TGCCACTAACCAGCTGGGACATTGGGCAAGTCTCGTTCTTCCTCTGAGAATCCATTCATT
        CATTTGCAAAATTAAGTTTAAAAAAATCTCTACATTTGTCCCAGGATGCTTGTGAAAATC
        CAAGGTAGAGGAAAGCACTTCTAAAACATAAAGTAATTGATGTGTATAAAATGCCACTCC
        [C,T]
        ATTCCTGAGGGTTTCTAAACTAAGAACTTGAGAATGATGATTATTGATGAGGTTAACTAT
```

```
            CTCTTCCTAATCGATAGTTGGTCATATCCACTCTATTATTTATACAAAAGTAAGGGTGAA
            AATATATATGTTTACATATATGTATAATGTATAATATGTTTGCATATGAAAATTCTTAGA
            ATAGCATTCAAATCCTTGGAATAACATTTCGAATTCTACCAGAACCTATGTGCCCGGGCC
            TCTGCCGATTTCTTCACCCTTAACCCTTGATACTTCCTTCATCTCTCCACTCCAGTCATT

198458      CTAAACTAAGAACTTGAGAATGATGATTATTGATGAGGTTAACTATCTCTTCCTAATCGA
            TAGTTGGTCATATCCACTCTATTATTTATACAAAAGTAAGGGTGAAAATATATATGTTTA
            CATATATGTATAATGTATAATATGTTTGCATATGAAAATTCTTAGAATAGCATTCAAATC
            CTTGGAATAACATTTCGAATTCTACCAGAACCTATGTGCCCGGGCCTCTGCCGATTTCTT
            CACCCTTAACCCTTGATACTTCCTTCATCTCTCCACTCCAGTCATTCTGTTTGTCTTTCA
            [C,T]
            CTCCCTGAATACACCATGTTCTTTCTCATCATTGAGCCTTCATACATGTTTCCTCTGCCT
            GGGACTTCCTCCCCCCATCTCCCTCCTCTTGCCTGCCAATCCCTCCTCAGCCTTCCACAC
            TCAAAGTAAATGTCATTCCCCAGCGAAGCCTTCTCTGGCCTTTCTTATTATGCTTCATGG
            AAGCCTCTACTTCTCTGCTCATGGCCTTCATCACATTGCTAATTCCATTTGGTGGCGTAG
            CATAATGACTGGGAGGCATTGTACAGCATGGCGTAGAGCTGGTAGGGTGCCATGGATCAG

199076      CCTCAACACTGAATCCTGGCTTCACCCACTTACTAGTCTGGGGTTCCGGATAATTTATTTG
            AGCTCTTTGTTCCTTAATTCTCTTATCTAGTAAGTGGGGATCACCTTAACCATGCCAACC
            TCATAGGGTCATTGAGAGGATTAAATGATCTAAGAGTGTGCAGAAGTTCTAAGTACTGGA
            ACTGGCCCATTGAAAGTTGGGTCTTAATCTCTCAGACTTAATGCTCTCTATGCCTGTGCT
            GTCAGATAACCTTGCCACTAGCCGTATGTGGCTGTGTTTAGGTTGAATTTTAAATAAATTCC
            [C,A]
            ATTTAAAAATCAGTTCTTCAGTTGCACTATCTACATGTCAAGTGCTCAGTAGCCACATGT
            GGCTAGTGGCTACCACATCAGGCAGCACAGATGTAGAACATTTACATCACTGCAGAAAGT
            TCTACTTTAAAGTTCTCTTTGTCCACTCTCCGTCCTCACCTCCCTTAAACCTGTCTTCTC
            TGCTCTTATGTCTAGAACCGCATCTTCTACCTCACAGCCAATCTTATCTCATTCATTAAG
            GCTATGTCAGTTGTCTATTGCTGCTGTACAAATTACCACAAACAGTGACTTAAAACAACA

199527      CGTCCTCACCTCCCTTAAACCTGTCTTCTCTGCTCTTATGTCTAGAACCGCATCTTCTAC
            CTCACAGCCAATCTTATCTCATTCATTAAGGCTATGTCAGTTGTCTATTGCTGCTGTACA
            AATTACCACAAACAGTGACTTAAAACAACACAGATTTATCATCTCACAATTCTGTAGGTC
            AGAAGTCTGACTTGAGTTTCACTGGACTAAAATCAAAGTGTTGGCAAGGTCATGTTTCTT
            CCTGGAGGCTCCAGAGTTAAGTTTGTTTCTTTGCCTTTTCCAGTTTCTTAAAGGCCACCT
            [A,G]
            TATTCCTTGGCTCCCATGTTACCAAGCTTTCTCCATATTCAAAACCAGCAATGTTACCTC
            TCTCTGACCCTTCTTCTATCATCACATCTTCTCGCTAACCACAGCCTTCCAGAGCCCATC
            TCCCATCTCTGACTGGGAGATCTCCTCCTTCAGGAATCAGCTACAGTAACCTGCCTTGAC
            TTACAGCAGGTACCAAATAAGGGCACCCTATTTGGCTATGAATGTAGCCACTGGGAACGT
            ATCCACTTCTTCAGCAAACTTTTGGCATGTTGATTGTACACAGACACTCTTTCTGGGCTC

199584      TACCTCACAGCCAATCTTATCTCATTCATTAAGGCTATGTCAGTTGTCTATTGCTGCTGT
            ACAAATTACCACAAACAGTGACTTAAAACAACACAGATTTATCATCTCACAATTCTGTAG
            GTCAGAAGTCTGACTTGAGTTTCACTGGACTAAAATCAAAGTGTTGGCAAGGTCATGTTT
            CTTCCTGGAGGCTCCAGAGTTAAGTTTGTTTCTTTGCCTTTTCCAGTTTCTTAAAGGCCA
            CCTATATTCCTTGGCTCCCATGTTACCAAGCTTTCTCCATATTCAAAACCAGCAATGTTA
            [C,G]
            CTCTCTCTGACCCTTCTTCTATCATCACATCTTCTCGCTAACCACAGCCTTCCAGAGCCC
            ATCTCCCATCTCTGACTGGGAGATCTCCTCCTTCAGGAATCAGCTACAGTAACCTGCCTT
            GACTTACAGCAGGTACCAAATAAGGGCACCCTATTTGGCTATGAATGTAGCCACTGGGGA
            CGTATCCACTTCTTCAGCAAACTTTTGGCATGTTGATTGTACACAGACACTCTTTCTGGG
            CTCAAAAACCCTTGAGAATGACATTTATCCAGAAATAGTCCAAGTCTGAGTTCATTTTTG

200070      CCACTTCTTCAGCAAACTTTTGGCATGTTGATTGTACACAGACACTCTTTCTGGGCTCAA
            AAACCCTTGAGAATGACATTTATCCAGAAATAGTCCAAGTCTGAGTTCATTTTTGTTGTC
            CCATGGTCTTCTGATTTTTGCTGCTGGAGAAGACATTTGCTAGGTCACTTAGCTCTTATA
            ACTTTCAATTTCCACATCTGTAAAACGGGCACAGATCATGTCTGCATTAGCGCCTGATCA
            CTGTTCAGTGAATGTTACCTGTGTTAGTGGTTATTAATAGCTATAGTAAATGTTGAAGAG
            [T,G]
            TAGCACACGGCTGAAATCTGGAAAACACTGAGGTGGCTTGTTTATTTCTTTCAAAGCATT
            TAGCAGCTACTGTTAAGAGTACTGCCTCTGGAAGGGACACCAAATATGTGACCATCTCCC
            CAAGGCCATCTTCCTTTCAGATTCTTTTTTTGTTTTTTTGGAGACAGAGCCTTGCTCTGT
            CGCTCAGACTGGAGTGCAATGGCATGGTCTCGGCTCACTGCAACCTCCACCTCCCGGATT
            CAAGTGATTCTCCTGCCTCAGCCTCCCGAGTGGTTGGGATTATAGGTGCCCATCACCACA

200429      TTTAGCAGCTACTGTTAAGAGTACTGCCTCTGGAAGGGACACCAAATATGTGACCATCTC
            CCCAAGGCCATCTTCCTTTCAGATTCTTTTTTTGTTTTTTTGGAGACAGAGCCTTGCTCT
            GTCGCTCAGACTGGAGTGCAATGGCATGGTCTCGGCTCACTGCAACCTCCACCTCCCGGA
            TTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTGGTTGGGATTATAGGTGCCCATCACCA
            CACCTGGCTAATTTTTGTATTTTGGGTAGACACGGGGTTTCTCACGACGTTGGCCAGACT
            [A,G]
```

```
          GTCTCAAACTCCTGACCGTGTGATCCATTCACCTCCGCCTCCCAAAGTGCTGAGATTACA
          GGTATGAGCCACCACCCCCAGGCTTTTTTTTCTTTCTTTCTTTCTTTTTTGAGGCAGGGT
          CTCGCTCTCTTGCCCAGGCTGGAGTGCAGTGGTACTATCATAGCTCACTATAACCTCAAA
          CTCCTGGGCTCAAGTGATCCACCCACCTCGGCCTCCCAAAGTGCTGGGATTACAAGCATG
          AGCCACTGTCCCCAGCCCCTTTCTTTCAGATTCTGAGAACTGCTGGTATCACCTCCTGCC

200676    CTAATTTTTGTATTTTGGGTAGACACGGGGTTTCTCACGACGTTGGCCAGACTAGTCTCA
          AACTCCTGACCGTGTGATCCATTCACCTCCGCCTCCCAAAGTGCTGAGATTACAGGTATG
          AGCCACCACCCCCAGGCTTTTTTTTCTTTCTTTCTTTCTTTTTTGAGGCAGGGTCTCGCT
          CTCTTGCCCAGGCTGGAGTGCAGTGGTACTATCATAGCTCACTATAACCTCAAACTCCTG
          GGCTCAAGTGATCCACCCACCTCGGCCTCCCAAAGTGCTGGGATTACAAGCATGAGCCAC
          [A,G,T]
          GTCCCCAGCCCCTTTCTTTCAGATTCTGAGAACTGCTGGTATCACCTCCTGCCTTGACAA
          TGAAAACATAGATGCAGCATTTTTGTGTAAGGCCCAAGCAGGCAAGCCTATTGCTCCTAG
          ATAGAAAATTGTTGACCATAGACCTGGGCTTTTCCTCAGAATCCTCAGAATGGCCTTTTG
          CTCTCAGGGAAAAAAGAATATTGCTATTTCCTGGATAGAACAAATTGGCATTTCTACATT
          GTATATGAGTAGTTATGTGTTTGCCATAATTAAAATATGGATGTCGAACTGTTTTCCCCA

202325    GGAAAAGTAGCTCCTGGCACGTAGCGGACATTCAGCCCACATTTGTTTACTTGTTTGTAC
          TTTTAAACTCCCTTCTATAGGCCACAGGGATTTTATATCAGCATTGCATTTGGGGGAGTC
          AGGCTGTGTAAGCCTGTGGAATGGATAAATCAGCAAAGAGAAATAACAGAGTACCTTAAA
          ATCCATGAGCAAATGGTTGTGCTTTAGTTTTCAGATCCCAGGGCTGTTTTTAAACTTACC
          TTCCAATGGCCAAATCCTTTCTTAGAATGTGGGCTTAAACGTCCTTTGTTTATGGGGGAT
          [T,C]
          TGCCTTTCAGAAAATCAATTCCTCACATCTGTGGCTTCAGGCTTTTTACTCAATCAGCCT
          CCTAACAAAGTAATTTTTCTGATTTTCAAGGGTGACCTAGTTGTACTGGTTTCAGTGAGC
          ATTACATGGCCTTACCTGATTGTGTATAGTAAAAAGGAGCTGTTTCTTCCAGATTTGGAG
          CCTCAGAGAAACTCTCCTGATCTTCAGGCCTATTTCCTGTTCACCCATGTGCCAATATAC
          CCTCTAGGTACCTGGATACAATTTGACATCCCACTGAAATGTGGGTGTTCTAAGCATCCA

202550    GTTTTTAAACTTACCTTCCAATGGCCAAATCCTTTCTTAGAATGTGGGCTTAAACGTCCT
          TTGTTTATGGGGGATTTGCCTTTCAGAAAATCAATTCCTCACATCTGTGGCTTCAGGCTT
          TTTACTCAATCAGCCTCCTAACAAAGTAATTTTTCTGATTTTCAAGGGTGACCTAGTTGT
          ACTGGTTTCAGTGAGCATTACATGGCCTTACCTGATTGTGTATAGTAAAAAGGAGCTGTT
          TCTTCCAGATTTGGAGCCTCAGAGAAACTCTCCTGATCTTCAGGCCTATTTCCTGTTCAC
          [C,T]
          CATGTGCCAATATACCCTCTAGGTACCTGGATACAATTTGACATCCCACTGAAATGTGGG
          TGTTCTAAGCATCCATTCATCATAAAGTTTAGGGGCTTCAGATACCAGGATGGGTACTTG
          CTCTACTAAAATGGGATCCTTAGGAAATCCCGTTCAAGGATACCACTTCACTATGGGGTA
          CTGATTTAGGGTCTCTCTCTGAATAAAATATCTTGTCAAAATCTGGTAGAATCACAAATT
          CTGATAAATGGCTGCCCAATGGAGAAGTTTAGGGAAAATTATCTTACATTTTTCATCGAA

202609    TTTGTTTATGGGGGATTTGCCTTTCAGAAAATCAATTCCTCACATCTGTGGCTTCAGGCT
          TTTTACTCAATCAGCCTCCTAACAAAGTAATTTTTCTGATTTTCAAGGGTGACCTAGTTG
          TACTGGTTTCAGTGAGCATTACATGGCCTTACCTGATTGTGTATAGTAAAAAGGAGCTGT
          TTCTTCCAGATTTGGAGCCTCAGAGAAACTCTCCTGATCTTCAGGCCTATTTCCTGTTCA
          CCCATGTGCCAATATACCCTCTAGGTACCTGGATACAATTTGACATCCCACTGAAATGTG
          [G,C]
          GTGTTCTAAGCATCCATTCATCATAAAGTTTAGGGGCTTCAGATACCAGGATGGGTACTT
          GCTCTACTAAAATGGGATCCTTAGGAAATCCCGTTCAAGGATACCACTTCACTATGGGGT
          ACTGATTTAGGGTCTCTCTCTGAATAAAATATCTTGTCAAAATCTGGTAGAATCACAAAT
          TCTGATAAATGGCTGCCCAATGGAGAAGTTTAGGGAAAATTATCTTACATTTTTCATCGA
          AGAACTGGTATTGTTGATTTAACCGTCTTTTCCCATCACCATTGTTCCTATAGCAATTTT

202714    AGGGTGACCTAGTTGTACTGGTTTCAGTGAGCATTACATGGCCTTACCTGATTGTGTATA
          GTAAAAAGGAGCTGTTTCTTCCAGATTTGGAGCCTCAGAGAAACTCTCCTGATCTTCAGG
          CCTATTTCCTGTTCACCCATGTGCCAATATACCCTCTAGGTACCTGGATACAATTTGACA
          TCCCACTGAAATGTGGGTGTTCTAAGCATCCATTCATCATAAAGTTTAGGGGCTTCAGAT
          ACCAGGATGGGTACTTGCTCTACTAAAATGGGATCCTTAGGAAATCCCGTTCAAGGATAC
          [C,T]
          ACTTCACTATGGGGTACTGATTTAGGGTCTCTCTCTGAATAAAATATCTTGTCAAAATCT
          GGTAGAATCACAAATTCTGATAAATGGCTGCCCAATGGAGAAGTTTAGGGAAAATTATCT
          TACATTTTTCATCGAAGAACTGGTATTGTTGATTTAACCGTCTTTTCCCATCACCATTGT
          TCCTATAGCAATTTTTAGACTGGGTGGAGGAATCTACTTCTCATTTCAATTCGATTTGAG
          TGGCCCTGCCCTGCCCCAAGTTTATTATCCCCACTTCTGACCCTGTGTATAACTAGAATG

202809    CAGAGAAACTCTCCTGATCTTCAGGCCTATTTCCTGTTCACCCATGTGCCAATATACCCT
          CTAGGTACCTGGATACAATTTGACATCCCACTGAAATGTGGGTGTTCTAAGCATCCATTC
          ATCATAAAGTTTAGGGGCTTCAGATACCAGGATGGGTACTTGCTCTACTAAAATGGGATC
          CTTAGGAAATCCCGTTCAAGGATACCACTTCACTATGGGGTACTGATTTAGGGTCTCTCT
          CTGAATAAAATATCTTGTCAAAATCTGGTAGAATCACAAATTCTGATAAATGGCTGCCCA
```

FIGURE 3, page 118 of 122

```
        [A,G]
        TGGAGAAGTTTAGGGAAAATTATCTTACATTTTTCATCGAAGAACTGGTATTGTTGATTT
        AACCGTCTTTTCCCATCACCATTGTTCCTATAGCAATTTTTAGACTGGGTGGAGGAATCT
        ACTTCTCATTTCAATTCGATTTGAGTGGCCCTGCCCTGCCCCAAGTTTATTATCCCCACT
        TCTGACCCTGTGTATAACTAGAATGAAAAGACTGGGCAGGAAACAAGACTAAAGGGACAC
        AAAGTCCTGCTGATATCAAAAGTAATCTTCTAAAGTCCCAAAGAATTTATAGCTTGCCAT

203159  ATTGTTGATTTAACCGTCTTTTCCCATCACCATTGTTCCTATAGCAATTTTTAGACTGGG
        TGGAGGAATCTACTTCTCATTTCAATTCGATTTGAGTGGCCCTGCCCTGCCCCAAGTTTA
        TTATCCCCACTTCTGACCCTGTGTATAACTAGAATGAAAAGACTGGGCAGGAAACAAGAC
        TAAAGGGACACAAAGTCCTGCTGATATCAAAAGTAATCTTCTAAAGTCCCAAAGAATTTA
        TAGCTTGCCATTCCATATGCTTTTTGGAAGTTTTGCTTTAAATCCTTGTTACCCAATTTT
        [G,C]
        ACCATACTGAATCATGTTATAGCATCAGATATAGACATAGCATCTCAGATATAGCCTAAA
        CCTCACCACCTCTCTCCATTTCTACTGCTGAGCCCAGAGCCCAGGCCATCTTCCACACAC
        CACACAGTAGCCTCCTTACCAGTCACGAGTCCTGCTATGTTCTTGCCCCTCTACAAGGCT
        ACTTTTCCACCACAAGACGAGGACAATAATTTTCAAATATATATCAGGTTATATGGCTCC
        TTTCCTTAAAACTTTTACCACTTTCCTGTTGCCAGTAAATATACAACATGGCCCTCAGAG

203168  TTAACCGTCTTTTCCCATCACCATTGTTCCTATAGCAATTTTTAGACTGGGTGGAGGAAT
        CTACTTCTCATTTCAATTCGATTTGAGTGGCCCTGCCCTGCCCCAAGTTTATTATCCCCA
        CTTCTGACCCTGTGTATAACTAGAATGAAAAGACTGGGCAGGAAACAAGACTAAAGGGAC
        ACAAAGTCCTGCTGATATCAAAAGTAATCTTCTAAAGTCCCAAAGAATTTATAGCTTGCC
        ATTCCATATGCTTTTTGGAAGTTTTGCTTTAAATCCTTGTTACCCAATTTTGACCATACT
        [G,A]
        AATCATGTTATAGCATCAGATATAGACATAGCATCTCAGATATAGCCTAAACCTCACCAC
        CTCTCTCCATTTCTACTGCTGAGCCCAGAGCCCAGGCCATCTTCCACACACCACACAGTA
        GCCTCCTTACCAGTCACGAGTCCTGCTATGTTCTTGCCCCTCTACAAGGCTACTTTTCCA
        CCACAAGACGAGGACAATAATTTTCAAATATATATCAGGTTATATGGCTCCTTTCCTTAA
        AACTTTTACCACTTTCCTGTTGCCAGTAAATATACAACATGGCCCTCAGAGCCCTCAATG

203704  CTTAAAACTTTTACCACTTTCCTGTTGCCAGTAAATATACAACATGGCCCTCAGAGCCCT
        CAATGCTGCTTCCCTGTGGCATCAGCTCTCACTCCTCTTTCTCTAGCTCATTTCTCTGCA
        GTTACACTGGCATCTTTGCATTCCTTGAGCACAGCCTCGCACTTTCCTCAAGTCACTTGC
        ATATGCTATTCCTTTACCTGGCATTTTCTATCACTAGAGTTTCATGTGCTGTGTGCCTCC
        TTGTCATTCAGGTCTCAGTCCAAGTGAAGCCCACCTTGGAAACGACATCCTTGACCAAGCA
        [C,T]
        TTTTAAAGTCACTCCCACTCACCCAGCTCACAGTCACAATTTCCTTTTTATTTGTACTTT
        TCATGGTGCTTATTCCTTCTGATATATTTTTATTGGTTGATTGATCTAGATTGAGGTTGG
        CAAACTTCTGCCTACTGGCCAAATTCATCCCACCACCTATTTTTGTACAGCCCATGAGCT
        AATGGTTACATGTACATTTTTAAATGGTTGTAATAAATCAAAAGAAGACCATTTTGTGAC
        ATGTGAAAATTATGAGAGATTAAAATTTCAGTGCCCATAAAGTTTTTCTGGAACATAGCT

204111  TAGATTGAGGTTGGCAAACTTCTGCCTACTGGCCAAATTCATCCCACCACCTATTTTTGT
        ACAGCCCATGAGCTAATGGTTACATGTACATTTTTAAATGGTTGTAATAAATCAAAAGAA
        GACCATTTTGTGACATGTGAAAATTATGAGAGATTAAAATTTCAGTGCCCATAAAGTTTT
        TCTGGAACATAGCTATGCTCATTTGTTTATATATTATCTATATCTGCCTCTGCATGACAA
        CAACAGAGATAAGTAGTGGCAACACAGACTATATGATCCACAAAGCCAAAGATATCTACC
        [G,A]
        TCTGGCCCTTTAGGATAAAGCTTGTCAACCCCTGGTCTGGATATGTATTTTCTTCATACT
        TCTCTACCTCCTAAATGTTCTAAAACACCAACTCTTTAAAAGCAAGGACCATATTTGTAT
        TTTTATTATATTCACAGTGCCTAGAATATACTGAAACAGAGTAAGCACATACATATAAAA
        GGTTGTTTATTACATCACTGGGAAGTTTATCAAATGTTTCTGTGCAATCAGAGAGCACAC
        TATGCTAGCCCATATTTCAAAAGATCTGCCAATAAGTAAGGGAAAAAAATGCCTGCAAAT

204132  CTGCCTACTGGCCAAATTCATCCCACCACCTATTTTTGTACAGCCCATGAGCTAATGGTT
        ACATGTACATTTTTAAATGGTTGTAATAAATCAAAAGAAGACCATTTTGTGACATGTGAA
        AATTATGAGAGATTAAAATTTCAGTGCCCATAAAGTTTTTCTGGAACATAGCTATGCTCA
        TTTGTTTATATATTATCTATATCTGCCTCTGCATGACAACAACAGAGATAAGTAGTGGCA
        ACACAGACTATATGATCCACAAAGCCAAAGATATCTACCGTCTGGCCCTTTAGGATAAAG
        [C,T]
        TTGTCAACCCCTGGTCTGGATATGTATTTTCTTCATACTTCTCTACCTCCTAAATGTTCT
        AAAACACCAACTCTTTAAAAGCAAGGACCATATTTGTATTTTTATTATATTCACAGTGCC
        TAGAATATACTGAAACAGAGTAAGCACATACATATAAAAGGTTGTTTATTACATCACTGG
        GAAGTTTATCAAATGTTTCTGTGCAATCAGAGAGCACACTATGCTAGCCCATATTTCAAA
        AGATCTGCCAATAAGTAAGGGAAAAAAATGCCTGCAAATTTAATAAAATAACACCTCAAG

204285  AGTTTTTCTGGAACATAGCTATGCTCATTTGTTTATATATTATCTATATCTGCCTCTGCA
        TGACAACAACAGAGATAAGTAGTGGCAACACAGACTATATGATCCACAAAGCCAAAGATA
        TCTACCGTCTGGCCCTTTAGGATAAAGCTTGTCAACCCCTGGTCTGGATATGTATTTTCT
        TCATACTTCTCTACCTCCTAAATGTTCTAAAACACCAACTCTTTAAAAGCAAGGACCATA
```

```
        TTTGTATTTTTATTATATTCACAGTGCCTAGAATATACTGAAACAGAGTAAGCACATACA
        [T,A]
        ATAAAAGGTTGTTTATTACATCACTGGGAAGTTTATCAAATGTTTCTGTGCAATCAGAGA
        GCACACTATGCTAGCCCATATTTCAAAAGATCTGCCAATAAGTAAGGGAAAAAAATGCCT
        GCAAATTTAATAAAATAACACCTCAAGCAGAACTCAGATAAAGTTACACATAAACTTATT
        AACTTCAAATCTTTTAAGTGTGTTAATTTAGATAATCCTAGGTGCTGTAACAGATAAACT
        CTGAAATCTCAGCTGTTTAATGCAAAAGAAGCTTTTTTTTGTTCACTCAGTGACCACTTT

204334  CTGCCTCTGCATGACAACAACAGAGATAAGTAGTGGCAACACAGACTATATGATCCACAA
        AGCCAAAGATATCTACCGTCTGGCCCTTTAGGATAAAGCTTGTCAACCCCTGGTCTGGAT
        ATGTATTTTCTTCATACTTCTCTACCTCCTAAATGTTCTAAAACACCAACTCTTTAAAAG
        CAAGGACCATATTTGTATTTTTATTATATTCACAGTGCCTAGAATATACTGAAACAGAGT
        AAGCACATACATATAAAAGGTTGTTTATTACATCACTGGGAAGTTTATCAAATGTTTCTG
        [T,G]
        GCAATCAGAGAGCACACTATGCTAGCCCATATTTCAAAAGATCTGCCAATAAGTAAGGGA
        AAAAAATGCCTGCAAATTTAATAAAATAACACCTCAAGCAGAACTCAGATAAAGTTACAC
        ATAAACTTATTAACTTCAAATCTTTTAAGTGTGTTAATTTAGATAATCCTAGGTGCTGTA
        ACAGATAAACTCTGAAATCTCAGCTGTTTAATGCAAAAGAAGCTTTTTTTTGTTCACTCA
        GTGACCACTTTTTTGGCTGAGGGTTCTGGCTAAGACTCAGGCTCATGGACCCTCCACTGT

205015  GGGCATCAGCCTAGAAGAGATGCACATCACTTCTGTTGTATTCCGTTGGCCAGAACCCAG
        TTACTTGGCTCAATCAGAGGTAAAACAAGCTGGGAAATGTCATTGCTGGCCAGGTAGCCA
        CTCTCCACCAACATCTCTACACCATGGAAGGAAAATAAGAATGCTTGGGAGTCAGCTAAT
        TATCTTGGCCACAATAGACAACTTAGTCTTTAAAAATTGATACTAAAGGATCTTATTTTT
        TGAGGTAAGGGGCTGTGGTCTCAGAGGCAGCCTGGAGATACCAATTTCTGAATTTGATTT
        [G,T]
        ATGACTGTGCAATATAGATCAATTGAATTTTCAGTTCTATGATCATCTCCTTTTAAGACT
        TTCTCCACTTAAAAAATCTGATCTGTCATCTAGATTCATTTTCTACATTCAAAGAATCTT
        TAGAGGTAGATGGAAAACACGGAGATCAAAAATTATAACTGGCCCCAGGAGAAGACCTCT
        CACTGTCAGAATTGTTTAAATCCTCTCCTGACTGGTAGGCCCCAATCTTTACCAACTACT
        AACTCTGATTTACTTTTAGAAAGAATCAAAATTCCTGCATATCCTCAGTAGAGAATCAAA

205155  ACCATGGAAGGAAAATAAGAATGCTTGGGAGTCAGCTAATTATCTTGGCCACAATAGACA
        ACTTAGTCTTTAAAAATTGATACTAAAGGATCTTATTTTTTGAGGTAAGGGGCTGTGGTC
        TCAGAGGCAGCCTGGAGATACCAATTTCTGAATTTGATTTGATGACTGTGCAATATAGAT
        CAATTGAATTTTCAGTTCTATGATCATCTCCTTTTAAGACTTTCTCCACTTAAAAAAATCT
        GATCTGTCATCTAGATTCATTTTCTACATTCAAAGAATCTTTAGAGGTAGATGGAAAACA
        [C,A]
        GGAGATCAAAAATTATAACTGGCCCCAGGAGAAGACCTCTCACTGTCAGAATTGTTTAAA
        TCCTCTCCTGACTGGTAGGCCCCAATCTTTACCAACTACTAACTCTGATTTACTTTTAGA
        AAGAATCAAAATTCCTGCATATCCTCAGTAGAGAATCAAAGTGCTGTATTATAATCCAAC
        CATTTCCCAAAGAAAGGAAAATTTGCTCTAATCTCCAAAGTGCAATGTCTGTTCAAAAAT
        CTTTGCCAGCTTTCTTTTCATCAAACTGTGGAACCAGATTTCTCAGTCTACTAGTTTACA

205510  TTTAAATCCTCTCCTGACTGGTAGGCCCCAATCTTTACCAACTACTAACTCTGATTTACT
        TTTAGAAAGAATCAAAATTCCTGCATATCCTCAGTAGAGAATCAAAGTGCTGTATTATAA
        TCCAACCATTTCCCAAAGAAAGGAAAATTTGCTCTAATCTCCAAAGTGCAATGTCTGTTC
        AAAAATCTTTGCCAGCTTTCTTTTCATCAAACTGTGGAACCAGATTTCTCAGTCTACTAG
        TTTACATGAGGCATAGGCATGAGGCTGAGTATCACTCAGCCCACTGACCCTGGCAATATT
        [T,A]
        TGTTTTATCTCCCTACAAAAGAGTTAGAAATAAAATAGGTTTGTTTACAATTTCTAACTA
        TTCTACTAGCTTTTGATATGAAAGTACCTAGCATATAAGCCAAGCTATACCACATTTTTT
        TAGAGATCCCAATTTAACAATAGTGCTAAAATTAATAAGTAGTGCTAGCTTTGAAGGACA
        ACTATCCTTAAAAATTAAGGTGTCTTTCTAAGCCATATACATCTGGCTTACACAGATTCA
        TCTTGCTTTTTTTTCCTATCTTGTATGAAAACCTTGGGATTTTACGGCAGTTTTATAATT

205712  TTCATCAAACTGTGGAACCAGATTTCTCAGTCTACTAGTTTACATGAGGCATAGGCATGA
        GGCTGAGTATCACTCAGCCCACTGACCCTGGCAATATTTTGTTTTATCTCCCTACAAAAG
        AGTTAGAAATAAAATAGGTTTGTTTACAATTTCTAACTATTCTACTAGCTTTTGATATGA
        AAGTACCTAGCATATAAGCCAAGCTATACCACATTTTTTTAGAGATCCCAATTTAACAAT
        AGTGCTAAAATTAATAAGTAGTGCTAGCTTTGAAGGACAACTATCCTTAAAAATTAAGGT
        [G,A]
        TCTTTCTAAGCCATATACATCTGGCTTACACAGATTCATCTTGCTTTTTTTTCCTATCTT
        GTATGAAAACCTTGGGATTTTACGGCAGTTTTATAATTTTTAAACCACATACCCTGAACA
        TTCTATACATAAAGAAGGGTTATATTGTCAAGTGAATTTCAAAATGCTCTATAATGCATG
        CTTCTTTTGCAGATAATGTTCAACAGCAAATTGAAAACAGAAATGTCTTGTAGTATAGAA
        ACCTGTTAACCTTCAACTAGGCACTACCCTAATGAATATCATTTTTTAGCTTACTGACAA

206028  TACATCTGGCTTACACAGATTCATCTTGCTTTTTTTTCCTATCTTGTATGAAAACCTTGG
        GATTTTACGGCAGTTTTATAATTTTTAAACCACATACCCTGAACATTCTATACATAAAGA
        AGGGTTATATTGTCAAGTGAATTTCAAAATGCTCTATAATGCATGCTTCTTTTGCAGATA
```

<p style="text-align: center;">FIGURE 3, page 120 of 122</p>

```
        ATGTTCAACAGCAAATTGAAAACAGAAATGTCTTGTAGTATAGAAACCTGTTAACCTTCA
        ACTAGGCACTACCCTAATGAATATCATTTTTTAGCTTACTGACAATATGAACCATACACT
        [G,A]
        TGCTAATTGTTTTACATGCATTAACTAATGTAGTTCTCATAGCAGCCCATGAGGCAGGTA
        CCATTGTTACATCCACTCTACAGATCAGGGACTGAGGACCACAGAGGTCAGGTAACTTGC
        TCAAGCTGATAGTTGGTAATTAGGAAAGCCTAGCTTTTAAACCAGGTCTGGCCTGAGGCC
        AGAGACCAAGATCTTGACCACTGGGCTCCCTCTTTTTTAAAATAATACATCTTAATACTC
        AGTGGCTTTTAGAGGAATTGGTTGCATGTCAAAGGAAGCAACTTCCTTTCTACTGATGGT

206073  GTATGAAACCTTGGGATTTTACGGCAGTTTTATAATTTTTAAACCACATACCCTGAACA
        TTCTATACATAAAGAAGGGTTATATTGTCAAGTGAATTTCAAAATGCTCTATAATGCATG
        CTTCTTTTGCAGATAATGTTCAACAGCAAATTGAAAACAGAAATGTCTTGTAGTATAGAA
        ACCTGTTAACCTTCAACTAGGCACTACCCTAATGAATATCATTTTTTAGCTTACTGACAA
        TATGAACCATACACTGTGCTAATTGTTTTACATGCATTAACTAATGTAGTTCTCATAGCA
        [G,C]
        CCCATGAGGCAGGTACCATTGTTACATCCACTCTACAGATCAGGGACTGAGGACCACAGA
        GGTCAGGTAACTTGCTCAAGCTGATAGTTGGTAATTAGGAAAGCCTAGCTTTTAAACCAG
        GTCTGGCCTGAGGCCAGAGACCAAGATCTTGACCACTGGGCTCCCTCTTTTTTAAAATAA
        TACATCTTAATACTCAGTGGCTTTTAGAGGAATTGGTTGCATGTCAAAGGAAGCAACTTC
        CTTTCTACTGATGGTTGTGCAGTTTGAGTAGGAATATTTAAACCTGTGGACTAATTGTGA

206487  AAACCAGGTCTGGCCTGAGGCCAGAGACCAAGATCTTGACCACTGGGCTCCCTCTTTTTT
        AAAATAATACATCTTAATACTCAGTGGCTTTTAGAGGAATTGGTTGCATGTCAAAGGAAG
        CAACTTCCTTTCTACTGATGGTTGTGCAGTTTGAGTAGGAATATTTAAACCTGTGGACTA
        ATTGTGAAGAAGGAAGAAGAAAGACAGGAAGGAAAGGAGGAAGAATAGGAGGAAGGAAGG
        GAGAAAGGATGGATGACAGGGAAGAAAATGAACAAGAAGGAGGAGAAAGGGAAAAGAAAA
        [-,A]
        AAAACCTTAGGACCATCTATGAGGGGATAAATCATATTTGACAGATATTTTCCCAGGTTT
        GTATTGATTTTATTAAATAATCTTACCTTTGAGGTCCACAAGACCTGGGTTCTATGTTCT
        GCCACTAATCTACTATATAACCTATTGTTTTGTTAGATCATTTAATCTCCCTAAGCCTAA
        GTTTTCCTATCTGTAAAGCAGAGAAAATAATCCTAAGCCTGCCTGCACTATCTGCATAGT
        GTAAAGATGTTATAAAAGTACTGTGGAGATTTAAAAAACAAAACAATACCAAAGGAGAAA

207036  GTTATAAAAGTACTGTGGAGATTTAAAAAACAAAACAATACCAAAGGAGAAAACTTTACA
        TCATAATATACTACCAGAGTGCTTTTAAACATCTATTTTTCAGCTAGAAGGCTCCTTGAG
        AAAGGCAACTCTTGCGGGGAATCCCAATAGGTGAAATAGATAAAAAGCAGAGCTGACCAT
        TAGAGCAAGGATGAGGAAGCCAGAGCTCTCTCCTCTTCACTGCCCCTCACCACCTTCCAT
        GAGCGGTGAAAGGCCCCACAAGTCTCTTAGGGTTCCCTAGAACACAGTCCTTGCAAAAGC
        [G,A]
        AGGGAACTGAGACCACACTGTCTTGAGCAAATTCTGTGGTCTCTGCGCCTCTGCTTCTCC
        CTGTGAAAAAGGAAAAAGTTGGACAAAATGATTCTTCAGTCCCCTTCCAGTTCTGACATT
        CTAGAAACGTGAGTTTCTGGTTCTTCTGTCATTAGAAAGCAATGTCTCCTTCCACCTTGA
        CTAACAGCATCCCTCACAGGGAACATGGTACACATGCCTGCACTGAGGGTAAGCCTCCAT
        GCAGTATCCTGAGAGACATGCTCCCCGTCAGACCTCCGAGCTGTCTCAGCATCGATAGGG

209309  TTCAATTAATATTTCTTGAAAGACCTTGGAAAATGAATTAGTATAAATAACCTACTCAAA
        TTTGAAAAATTAATATTGTCAACCATAATTTTTAGGCACTCCTATATATTCAATATTGTA
        ATAGTTTATACTTGGAGACAGAAGAAATTTTTAAAAATAAAGGATAAACAACCATCATAG
        GAAGTTAAATCTAGATGGAAAAATACAGTTAACCTAAAAATAAAGTAAAAGAATGTAATG
        TTTAAATCATATGATTCCAACTATAGTTCAGAATGAGTTCACTGAAGTGCAGGGTTAGTA
        [G,C]
        ACATGGGGGAAAGAGGGGTTTGACCCTGTGAACAACTGCAGGGAATTAAATCCCATGGTC
        CTGGCTTGCATTGTACAAAACAGACTGGCTGTGTAAACAGTTAAGCCCTTATCCCTCAGA
        GGTGGCAATTTCCAAACTGAACCAATTATTGTGGGGATTTTCCCTGGGAGCAAAATTGGG
        GGCACCTGAAAAGCACTGTGCTTCTTATTATTTCTGTTTACCAATATTTTAGAGCTCGGT
        ATGTCCAATTCTTCATGAGCTCCTTACTTGCCTGTCTCTGGTATTGACTGGGTGACCCAG

210867  GAGCTGGCGGCAGAGATTGCCAAGCACGTGGGCTACTCCTACCGTCTGGAGATTGTCAGT
        GATGGAAAATACGGAGCCCGAGACCCTGACACGAAGGCCTGGAATGGCATGGTGGGAGAG
        CTGGTCTATGGAGTAAGTTCACTGCAGGGTGGGAAATTAGAGGGCGGAGGCAGAGGGTTT
        GACAGGAAATCATTTGGTGGTTGGGTGGCCCTGCCCACAGATGTCTATGAAACCCTGTAA
        TTGAGTGTTGTTGCTGCTGAACAGATGAGTCATCCAAAATCCAATTTCTTCAGACACTCT
        [T,G]
        TGTTCAGGTTACTGGTCCCAGGTCCCTCAATCCCACTCAGAGTCTTGTGACGTCAGTTGA
        TTGTCGTCCAACACAGGTGACAGCATAGCTCCAAGATCAATTTTCTTGAGGCAGACTGCT
        GAGTTGTCTATACAAAGTCACTTGTGGCTCTCTCAGTATCAGTTTCTTCTCTGATATTAA
        ATGCATCTGGAGCCAACCTAACTTTCTAGTTACTTGCCTCTCTAGTTTCATGCTCTCTCA
        TGAAATTTCCAATTCAGTCAAATGCCCCTTAATTACTCTGTTCCCTAGAGTGCTCCCTTC

212386  GAAATAAGTAAGGTGTGAGAGGAGAATGAGAAAACGCATGGTTTTTGTTGAGGACTTGGG
        TTGAAGAGTAGTCAGGGATACATATGAGTAAAAAATAGCAAGAGGAAGAGTGTGGATGAT
```

FIGURE 3, page 121 of 122

```
TCAGTGGGCATTGGGAGATCACGAAGGTATTTGAGTAGAGAGACAACAAAAGGCAATGGA
AGAAGCCTCCAGCTGCCTTGTGCAGGGAAGGGACCACCACGGCTTCACTCATAGAAACTA
AAACACATGCCAAGCCCCAGGTCAATGTTAAGTGCTCATAAGGACAAGCAGCCACTGAGG
[A,G]
AGATGATAAATCTTGTTTCATATCAGGGCAAGAGGAGCCATGATGGCCCTGAGAGACATA
CAAAGGGAATTCAAAGAAGAAAAAGATGGAATAAAGGAAATCTTCCTCAGGGAGGTAGCT
TTTGAGATGACATGTGAAGGTGGTTATTGAGTTGGGGAATGGGATGTGCTTCTCTCCTTT
CTTATTCCCTTTACCACCTCTCACTTTGGGAAGCTCCATGGACAAAAGGTAGAGACCTGG
ATAGTACATGCTGCATCTGGAGGCTGGTTTCCATGGGAACTCCCATCAAGCTCTTAAGGT
```

Chromosome mapping:
Chromosome #: 5